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ERRATA.

1. The word "Butter-makers," in heading on page 670, should be "Cheese-makers."
2. The word "Kirly," on page 319, in the tenth and thirteenth lines, should be "Kirby."
3. The term "Forced method" is inaptly used to indicate method for getting results quickly. See page 665.
4. At page 324, line 24, the words "do not" should be omitted.

FIFTH ANNUAL REPORT

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OF THE

NEW YORK (STATE) DAIRY COMMISSIONER.

FOR THE YEAR 1888.

TRANSMITTED TO THE LEGISLATURE MARCH 1, 1889.

ALBANY:
THE TROY PRESS COMPANY, PRINTERS.
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STATE OF NEW YORK.

No. 20.

IN ASSEMBLY,

MARCH 1, 1889.

FIFTH ANNUAL REPORT

OF THE

NEW YORK STATE DAIRY COMMISSIONER.

To the Legislature of the State of New York:

The New York State Dairy Commissioner most respectfully submits to your honorable body this, his fifth annual report.

JOSIAH K. BROWN,
New York State Dairy Commissioner.

REPORT.

To the Legislature of the State of New York:

The fifth annual report of the New York State Dairy Commissioner is hereby respectfully submitted to your honorable body.

No oleomargarine or imitation butter is now made in this State, so far as we have been able to ascertain, and it is confidently believed none is made. Compared to the amount which has been sold in previous years, not very much is now being sold within the State. Some of these goods, made in other States, are being shipped into this State and occasionally clandestinely sold in small quantities by small dealers bold enough to make such sales and take the chance of being found out and prosecuted. In some instances, these goods are shipped by manufacturers in other States directly to the consumer in our State and often shipped in boxes and other packages intended to make it difficult to detect.

The work of organizing and extending this department has been so steadily carried forward that representatives of this commission are so located in different portions of the State that it is difficult for the sale of these goods, in any form, to be carried on to any considerable extent, without our becoming acquainted with the fact, and when offenders against these laws are discovered, prosecutions are promptly made and convictions are very sure to follow; so that it is at a very great risk that persons disposed to violate the law engage in the business of selling these imitations of dairy products.

I am perfectly satisfied, however, that unless a strict surveillance is constantly maintained over the entire State, and prosecutions and convictions promptly follow every

sale of these forbidden goods, they will surely appear among the commodities offered for sale in all the markets of the State.

The reduction of the manufacture and sale of imitation butter throughout the United States continues to be very large, but while the amount manufactured and sold the year past is somewhat larger than during the previous year, yet this amount is only about one-third as much as was sold during the year 1886. This recent increase is due doubtless to extraordinary efforts being made by manufacturers and dealers to effect sales of their goods in States where such sales are not prevented. That which has thus far been gained in preventing the manufacture and suppressing the sale of these goods, will very soon be lost unless continued efforts are made to enforce these prohibitory statutes by the officers designated for that purpose in the several States and by the federal authorities.

The usual inspections, by the agents of this department, of milk which is produced in the districts from which the supply is drawn for the great cities of New York, Brooklyn and adjacent cities and towns, have been carried on during the past season, and the result shows that the quality of the milk in that portion of the State is steadily improving, and although there was found to be but a very small percentage of this milk which was below our statutory standard last year, as was shown in my fourth annual report, it is still better this year, and the amount of adulterated milk is evidently growing less and less each year.

We have been able to devote some time to the inspection of milk delivered to consumers in the cities of the State, and while in several instances cases of adulteration have been found, yet, upon the whole, the quality of milk sold by dealers and peddlers in the cities is considerably improved over last year.

During the present season an attempt has been made to so extend the operations of this department as to

have our agents visit a very large proportion of the dairy counties of the State, in addition to the work of inspection which has usually been done within those counties furnishing milk to be supplied to consumers in the city of New York and that vicinity.

It has been our purpose to visit as many cheese factories and creameries as possible, with a view of ascertaining their condition as to cleanliness, water supply, drainage, etc., and to examine and inspect the quality of the milk delivered there by the great number of different farmers who patronize them. This work occupied the attention of all the available force of this department, which could be spared for that purpose, for nearly three months, and much was done by members of the force in searching for oleomargarine in addition to the work that was the primary object. We were able to visit about (1,200) twelve hundred of these factories and make complete and careful examinations and inspections. A blank paper for that purpose, called a "Factory Inspection Sheet," was filled out by each of our agents at the time the inspection was made and immediately forwarded to the main office at Albany. A vast amount of very valuable information has thus been secured.

In a very few cases it was ascertained that cheese factories were not kept in as cleanly a condition as they ought to be, and occasionally an instance of delivery, by an individual, of milk adulterated with water or otherwise unfit to be used at these establishments was found. But the most satisfactory and significant fact brought out by this work was that the dairy products of this State, as a whole, will compare favorably with the best article of food which goes into consumption by the people of this State. In fact, I think it may be safely said that no other article of food is as free from objectionable features as the products of the dairy. Everywhere throughout the State we were told that the quality of the milk produced by our dairymen had greatly improved since the creation of this department.

Our agents were, almost without exception, cordially welcomed and aided in every possible way in the performance of their duties.

The sentiment of those engaged in the manufacture of dairy products throughout the State is overwhelmingly in favor of having these visitations and inspections made at each factory and in every community where milk is produced for manufacture or consumption at least twice during each dairy season.

The following tabular statement of statistics and facts has been prepared from the great number of factory inspections and other documents which have been received at the Albany office, from which it is believed a vast amount of valuable information is given in detail.

TABLE OF STATISTICS.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY.

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Hume	Hume.....	August 1	Cheese.....	7	35	275	5,000	.....	.....	.....	.....
Babbitt.....	Centerville.....	1	"	7	21	225	4,400	.....	.....	.....	.....
Starr	Centerville.....	1	"	7	24	300	5,200	.....	.....	.....	.....
East Centerville.....	Centerville.....	1	"	7	23	250	4,300	.....	.....	.....	.....
Centerville.....	Centerville.....	1	"	7	23	300	.....	.....	.....	.....	.....
Pochuck.....	Centerville.....	1	"	6	19	250	3,000	.....	.....	.....	.....
Stone Spring.....	Hume.....	1	"	6	30	300	4,500	.....	.....	.....	.....
Mills' Mills.....	Hume.....	1	"	6	20	175	3,000	.....	.....	.....	.....
County Line	Hume.....	1	"	6 1/2	17	250	4,000	.....	.....	.....	.....
Hardy's	Rushford.....	2	"	8	34	480	9,000	.....	.....	.....	.....
Rush Creek	Hume.....	2	"	7	35	350	5,500	.....	.....	.....	.....
Fillmore Comb. No. 2.....	Hume.....	2	"	8	45	500	8,900	.....	.....	.....	.....
Fillmore Comb. No. 1.....	Hume.....	2	"	7	44	450	8,000	.....	.....	.....	.....
Rushford.....	Rushford.....	3	"	8	25	350	6,800	.....	.....	.....	.....
Pearl Creek	New Hudson.....	3	"	6	31	350	5,500	.....	.....	.....	.....
Mount Monroe.....	New Hudson.....	3	"	7	20	275	4,500	.....	.....	.....	.....
West Branch.....	Rushford.....	3	"	7	20	400	7,300	.....	.....	.....	.....
Kellogg.....	Rushford.....	3	"	7	26	225	4,200	.....	.....	.....	.....
Podunk.....	Rushford.....	3	"	6	25	425	6,200	.....	.....	.....	.....
Brookside	Rushford.....	3	"	7	26	300	6,200	.....	.....	.....	.....
Grove.....	Grove.....	3	"	5	14	100	1,560	.....	.....	.....	.....
East Granger.....	Granger.....	3	"	6	42	200	3,300	.....	.....	.....	.....
Birdsdall	Birdsdall.....	3	"	6	17	150	4,605	.....	.....	.....	.....
Empire	Allen.....	3	"	6	27	300	3,450	.....	.....	.....	.....
Short Track No. 3.....	Granger.....	3	"	7	58	250	5,100	.....	.....	.....	.....
West Hill.....	Allen.....	4	"	7	23	200	4,200	.....	.....	.....	.....
Canadea	Canadea.....	4	"	7	37	300	4,300	.....	.....	.....	.....
Ormal	Canadea.....	4	"	7	35	300	4,800	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Rhonga.....	Canada.....	August 4	Cheese.....	6	30	250	4,400	.....	.....	.....	.....
Houghton Creek	Canada.....	4	"	7	28	260	4,400	.....	.....	.....	.....
Allen.....	Allen.....	4	"	8	32	400	6,600	.....	.....	.....	.....
Angelica Union	Angelica	4	"	6	36	400	6,600	.....	.....	.....	.....
Transit Bridge	Belfast.....	4	"	9	20	260	2,850	.....	.....	.....	.....
Keystone.....	Allen.....	4	"	8	49	550	9,060	.....	.....	.....	.....
Angelica.....	Angelica	4	"	6	19	200	2,500	.....	.....	.....	.....
Caseville	Belfast.....	5	"	6	34	300	5,000	.....	.....	.....	.....
Fargo	New Hudson	5	"	8	30	450	8,000	.....	.....	.....	.....
Black Creek	New Hudson	5	"	8½	40	360	6,000	.....	.....	.....	.....
Sands	New Hudson	5	"	7	25	240	4,000	.....	.....	.....	.....
New Hudson Center	New Hudson	5	"	7	27	350	.....	.....	.....	.....	.....
Marshall	New Hudson	5	"	7	16	200	3,000	.....	.....	.....	.....
Belfast	Belfast	5	"	7	60	700	11,000	.....	.....	.....	.....
Able Baker.....	West Almond	6	"	7	13	175	3,000	.....	.....	.....	.....
White Creek	Belfast	6	"	7	42	420	6,300	.....	.....	.....	.....
Phillips Creek	Ward	6	"	7	38	500	8,800	.....	.....	.....	.....
Belmont.....	Amity.....	6	"	7	35	350	5,500	.....	.....	.....	.....
Nile.....	Friendship	6	"	7	80	700	10,400	.....	.....	.....	.....
Sherman.....	Wirt.....	6	"	6	17	180	3,120	.....	.....	.....	.....
Halls, A. E.....	Ward	7	"	6	29	280	4,000	.....	.....	.....	.....
Five Corners.....	Alfred.....	7	"	6	19	200	3,500	.....	.....	.....	.....
East Hill.....	Friendship	7	"	6	23	270	4,000	.....	.....	.....	.....
North Cuba	Cuba.....	7	"	12	25	400	7,000	.....	.....	.....	.....
Amsden's	Friendship	7	"	7	31	390	7,000	.....	.....	.....	.....
South Cuba	Cuba.....	7	"	12	30	450	6,500	.....	.....	.....	.....
Cuba Valley.....	Cuba.....	7	"	8	25	300	5,200	.....	.....	.....	.....
Keller Hill.....	Cuba.....	7	"	8	15	300	4,000	.....	.....	.....	.....
McHenry Valley.....	Almond.....	7	"	6	16	200	3,200	.....	.....	.....	.....
Karr Valley.....	Almond	7	"	7	38	250	4,000	.....	.....	.....	.....
West Almond.....	West Almond	7	"	7	39	450	7,000	.....	.....	.....	.....

Almond	August 7	Cheese	6	29	300	4,000
Almond	8	..	8	21	360	6,000
Laferty	8	..	8	32	620	10,000
Rice	9	..	6	20	175	3,500
Forest	9	..	7	45	495	7,000
West Clarksville	10	..	7	94	450	6,300
Spring Mills	10	..	6	35	250	2,700
Wildman	10	..	6	38	350	5,700
Clark, D. M.	10	..	4	15	150	2,000
Cryder Creek	10	..	6	50	600	8,000
Hallsport	10	..	6	71	600	11,000
Andover	10	..	6	36	200	3,000
Richburgh	10	..	6	42	400	5,600
Scio, No. 1	10	..	6	14	100	1,500
Smith's	10	..	6	22	180	3,000
Albion	11	..	6	33	480	7,000
Elm Valley	11	..	6	30	325	3,700
East Valley	11	..	6	20	200	4,000
Pleasant Valley	11	..	0	20	260	4,000
Vandermark	11	..	6	17	175	2,600
Cottrell	11	..	6	20	300	4,000
Collins	11	..	4	12	60	1,100
Trappin Brook	12	..	6	23	250	3,500
Little Genesee	11	..	5	14	110	1,700
South Bolivar	11	..	3	31	475	7,000
Genesee Valley	12	..	7	26	275	4,800
Amity	12	..				
Friendship	12	..				
East Friendship	12	..				

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.	
		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?		
Hume	Colored; full cream	60	90,000	10	8 $\frac{1}{2}$	Yes...	Natives, Holstein and grades.	
Babbitt	Full cream	60	88,000	9 $\frac{1}{2}$	9	"	d Holsteins.	
Hart	Full cream	60	100,000	9 $\frac{1}{2}$	9	"		
East Centerville	Full cream	60	88,800	10	8 $\frac{1}{2}$	"		
Centerville	Full cream	60	80,000	10 $\frac{1}{2}$	8 $\frac{1}{2}$	"		
Pochuck	Full cream	62	55,000	10.07	9	"		
Stone Spring	Full cream	60	80,000	10	9	"		
Mills' Mills	Full cream	60	58,000	10 $\frac{1}{2}$	8 $\frac{1}{2}$	"		
County Line	Full cream	60	63,000	9 $\frac{1}{2}$	8 $\frac{1}{2}$	"		
Hardy's	Full cream	60	185,000	10	9 $\frac{1}{2}$	"		
Rush Creek	Full cream	60	100,000	10	8 $\frac{1}{2}$	"		
Fillmore Comb, No. 2	Full cream	60	200,000	10 $\frac{1}{2}$	8 $\frac{1}{2}$	"		
Fillmore Comb, No. 1	Full cream	60	173,000	10.02	8 $\frac{1}{2}$	Yes...		
Rushford	Full cream	60	150,000	10	9	No...		
Pearl Creek	Colored; full cream	60	100,000	10	8 $\frac{1}{2}$	Yes...		
Mount Monroe	Full cream	60	90,000	10	9	"		
West Branch	Colored; full cream	60	160,000	9.06	9	"		
Kellogg	Full cream	60	73,000	10	8 $\frac{1}{2}$	"	Common or natives.	
Podunk	Full cream	60	125,000	10 $\frac{1}{2}$	8 $\frac{1}{2}$	"	Commons and grades.	
Brookside	Colored; full cream	60	120,000	10	9	"	Natives and grades.	
Grove	Full cream	67	82,000	10.06	8 $\frac{1}{2}$	"	Common or natives.	
East Granger	Full cream	60	55,000	10 $\frac{1}{2}$	9	"	Common or natives.	
Birdsall	Full cream	60	42,000	10.62	9	"	Common or natives.	
Empire	Full cream	67	100,000	10 $\frac{1}{2}$	8 $\frac{1}{2}$	Yes...	Common or natives.	
Short Track No. 3	Full cream	35	100,000	10 $\frac{1}{2}$	10	"	Natives, Holsteins.	
West Hill	Colored; full cream	60	80,000	10	8 $\frac{1}{2}$	"	Native and grades.	
Canadea	Full cream	60	60,000	10	8 $\frac{1}{2}$	"	Common and Holsteins.	
Ormal	Full cream	60	68,000	10	8 $\frac{1}{2}$	"	Common or native.	

Colored; full cream ..	68	70,000	10.8	9	..	rea.
Full cream	69	80,000 <td>10.6<td>8%<td>..<td>sta</td></td></td></td>	10.6 <td>8%<td>..<td>sta</td></td></td>	8% <td>..<td>sta</td></td>	.. <td>sta</td>	sta
Full cream	70	100,000 <td>10.4<td>9<td>..<td>B.</td></td></td></td>	10.4 <td>9<td>..<td>B.</td></td></td>	9 <td>..<td>B.</td></td>	.. <td>B.</td>	B.
Full cream	71	120,000 <td>10.2<td>9%<td>..<td>B.</td></td></td></td>	10.2 <td>9%<td>..<td>B.</td></td></td>	9% <td>..<td>B.</td></td>	.. <td>B.</td>	B.
Full cream	72	130,000 <td>10.1<td>9%<td>..<td></td></td></td></td>	10.1 <td>9%<td>..<td></td></td></td>	9% <td>..<td></td></td>	.. <td></td>	
Full cream	73	140,000 <td>10.0<td>9%<td>..<td></td></td></td></td>	10.0 <td>9%<td>..<td></td></td></td>	9% <td>..<td></td></td>	.. <td></td>	
Full cream	74	150,000 <td>9.9<td>9%<td>..<td></td></td></td></td>	9.9 <td>9%<td>..<td></td></td></td>	9% <td>..<td></td></td>	.. <td></td>	
Full cream	75	160,000 <td>9.8<td>9<td>..<td></td></td></td></td>	9.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	76	170,000 <td>9.7<td>8%<td>..<td></td></td></td></td>	9.7 <td>8%<td>..<td></td></td></td>	8% <td>..<td></td></td>	.. <td></td>	
Full cream	77	180,000 <td>9.6<td>9<td>..<td></td></td></td></td>	9.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	78	190,000 <td>9.5<td>9<td>..<td></td></td></td></td>	9.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	79	200,000 <td>9.4<td>9<td>..<td></td></td></td></td>	9.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	80	210,000 <td>9.3<td>9<td>..<td></td></td></td></td>	9.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	81	220,000 <td>9.2<td>9<td>..<td></td></td></td></td>	9.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	82	230,000 <td>9.1<td>9<td>..<td></td></td></td></td>	9.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	83	240,000 <td>9.0<td>9<td>..<td></td></td></td></td>	9.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	84	250,000 <td>8.9<td>9<td>..<td></td></td></td></td>	8.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	85	260,000 <td>8.8<td>9<td>..<td></td></td></td></td>	8.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	86	270,000 <td>8.7<td>9<td>..<td></td></td></td></td>	8.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	87	280,000 <td>8.6<td>9<td>..<td></td></td></td></td>	8.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	88	290,000 <td>8.5<td>9<td>..<td></td></td></td></td>	8.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	89	300,000 <td>8.4<td>9<td>..<td></td></td></td></td>	8.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	90	310,000 <td>8.3<td>9<td>..<td></td></td></td></td>	8.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	91	320,000 <td>8.2<td>9<td>..<td></td></td></td></td>	8.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	92	330,000 <td>8.1<td>9<td>..<td></td></td></td></td>	8.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	93	340,000 <td>8.0<td>9<td>..<td></td></td></td></td>	8.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	94	350,000 <td>7.9<td>9<td>..<td></td></td></td></td>	7.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	95	360,000 <td>7.8<td>9<td>..<td></td></td></td></td>	7.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	96	370,000 <td>7.7<td>9<td>..<td></td></td></td></td>	7.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	97	380,000 <td>7.6<td>9<td>..<td></td></td></td></td>	7.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	98	390,000 <td>7.5<td>9<td>..<td></td></td></td></td>	7.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	99	400,000 <td>7.4<td>9<td>..<td></td></td></td></td>	7.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	100	410,000 <td>7.3<td>9<td>..<td></td></td></td></td>	7.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	101	420,000 <td>7.2<td>9<td>..<td></td></td></td></td>	7.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	102	430,000 <td>7.1<td>9<td>..<td></td></td></td></td>	7.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	103	440,000 <td>7.0<td>9<td>..<td></td></td></td></td>	7.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	104	450,000 <td>6.9<td>9<td>..<td></td></td></td></td>	6.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	105	460,000 <td>6.8<td>9<td>..<td></td></td></td></td>	6.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	106	470,000 <td>6.7<td>9<td>..<td></td></td></td></td>	6.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	107	480,000 <td>6.6<td>9<td>..<td></td></td></td></td>	6.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	108	490,000 <td>6.5<td>9<td>..<td></td></td></td></td>	6.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	109	500,000 <td>6.4<td>9<td>..<td></td></td></td></td>	6.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	110	510,000 <td>6.3<td>9<td>..<td></td></td></td></td>	6.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	111	520,000 <td>6.2<td>9<td>..<td></td></td></td></td>	6.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	112	530,000 <td>6.1<td>9<td>..<td></td></td></td></td>	6.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	113	540,000 <td>6.0<td>9<td>..<td></td></td></td></td>	6.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	114	550,000 <td>5.9<td>9<td>..<td></td></td></td></td>	5.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	115	560,000 <td>5.8<td>9<td>..<td></td></td></td></td>	5.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	116	570,000 <td>5.7<td>9<td>..<td></td></td></td></td>	5.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	117	580,000 <td>5.6<td>9<td>..<td></td></td></td></td>	5.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	118	590,000 <td>5.5<td>9<td>..<td></td></td></td></td>	5.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	119	600,000 <td>5.4<td>9<td>..<td></td></td></td></td>	5.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	120	610,000 <td>5.3<td>9<td>..<td></td></td></td></td>	5.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	121	620,000 <td>5.2<td>9<td>..<td></td></td></td></td>	5.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	122	630,000 <td>5.1<td>9<td>..<td></td></td></td></td>	5.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	123	640,000 <td>5.0<td>9<td>..<td></td></td></td></td>	5.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	124	650,000 <td>4.9<td>9<td>..<td></td></td></td></td>	4.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	125	660,000 <td>4.8<td>9<td>..<td></td></td></td></td>	4.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	126	670,000 <td>4.7<td>9<td>..<td></td></td></td></td>	4.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	127	680,000 <td>4.6<td>9<td>..<td></td></td></td></td>	4.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	128	690,000 <td>4.5<td>9<td>..<td></td></td></td></td>	4.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	129	700,000 <td>4.4<td>9<td>..<td></td></td></td></td>	4.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	130	710,000 <td>4.3<td>9<td>..<td></td></td></td></td>	4.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	131	720,000 <td>4.2<td>9<td>..<td></td></td></td></td>	4.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	132	730,000 <td>4.1<td>9<td>..<td></td></td></td></td>	4.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	133	740,000 <td>4.0<td>9<td>..<td></td></td></td></td>	4.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	134	750,000 <td>3.9<td>9<td>..<td></td></td></td></td>	3.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	135	760,000 <td>3.8<td>9<td>..<td></td></td></td></td>	3.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	136	770,000 <td>3.7<td>9<td>..<td></td></td></td></td>	3.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	137	780,000 <td>3.6<td>9<td>..<td></td></td></td></td>	3.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	138	790,000 <td>3.5<td>9<td>..<td></td></td></td></td>	3.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	139	800,000 <td>3.4<td>9<td>..<td></td></td></td></td>	3.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	140	810,000 <td>3.3<td>9<td>..<td></td></td></td></td>	3.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	141	820,000 <td>3.2<td>9<td>..<td></td></td></td></td>	3.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	142	830,000 <td>3.1<td>9<td>..<td></td></td></td></td>	3.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	143	840,000 <td>3.0<td>9<td>..<td></td></td></td></td>	3.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	144	850,000 <td>2.9<td>9<td>..<td></td></td></td></td>	2.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	145	860,000 <td>2.8<td>9<td>..<td></td></td></td></td>	2.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	146	870,000 <td>2.7<td>9<td>..<td></td></td></td></td>	2.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	147	880,000 <td>2.6<td>9<td>..<td></td></td></td></td>	2.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	148	890,000 <td>2.5<td>9<td>..<td></td></td></td></td>	2.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	149	900,000 <td>2.4<td>9<td>..<td></td></td></td></td>	2.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	150	910,000 <td>2.3<td>9<td>..<td></td></td></td></td>	2.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	151	920,000 <td>2.2<td>9<td>..<td></td></td></td></td>	2.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	152	930,000 <td>2.1<td>9<td>..<td></td></td></td></td>	2.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	153	940,000 <td>2.0<td>9<td>..<td></td></td></td></td>	2.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	154	950,000 <td>1.9<td>9<td>..<td></td></td></td></td>	1.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	155	960,000 <td>1.8<td>9<td>..<td></td></td></td></td>	1.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	156	970,000 <td>1.7<td>9<td>..<td></td></td></td></td>	1.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	157	980,000 <td>1.6<td>9<td>..<td></td></td></td></td>	1.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	158	990,000 <td>1.5<td>9<td>..<td></td></td></td></td>	1.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	159	1,000,000 <td>1.4<td>9<td>..<td></td></td></td></td>	1.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	160	1,010,000 <td>1.3<td>9<td>..<td></td></td></td></td>	1.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	161	1,020,000 <td>1.2<td>9<td>..<td></td></td></td></td>	1.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	162	1,030,000 <td>1.1<td>9<td>..<td></td></td></td></td>	1.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	163	1,040,000 <td>1.0<td>9<td>..<td></td></td></td></td>	1.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	164	1,050,000 <td>0.9<td>9<td>..<td></td></td></td></td>	0.9 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	165	1,060,000 <td>0.8<td>9<td>..<td></td></td></td></td>	0.8 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	166	1,070,000 <td>0.7<td>9<td>..<td></td></td></td></td>	0.7 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	167	1,080,000 <td>0.6<td>9<td>..<td></td></td></td></td>	0.6 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	168	1,090,000 <td>0.5<td>9<td>..<td></td></td></td></td>	0.5 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	169	1,100,000 <td>0.4<td>9<td>..<td></td></td></td></td>	0.4 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	170	1,110,000 <td>0.3<td>9<td>..<td></td></td></td></td>	0.3 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	171	1,120,000 <td>0.2<td>9<td>..<td></td></td></td></td>	0.2 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	172	1,130,000 <td>0.1<td>9<td>..<td></td></td></td></td>	0.1 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	173	1,140,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	174	1,150,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	175	1,160,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	176	1,170,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	177	1,180,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	178	1,190,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	179	1,200,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	180	1,210,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	181	1,220,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	182	1,230,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	183	1,240,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	184	1,250,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	185	1,260,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	186	1,270,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	187	1,280,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	188	1,290,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	189	1,300,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	190	1,310,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	191	1,320,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	192	1,330,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	193	1,340,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	194	1,350,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	195	1,360,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	196	1,370,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	197	1,380,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	198	1,390,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	199	1,400,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	200	1,410,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	201	1,420,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	202	1,430,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	203	1,440,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	204	1,450,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	205	1,460,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	206	1,470,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	207	1,480,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	208	1,490,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	209	1,500,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	210	1,510,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	211	1,520,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	212	1,530,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	213	1,540,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	214	1,550,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	215	1,560,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	216	1,570,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	217	1,580,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	218	1,590,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	219	1,600,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	220	1,610,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	221	1,620,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	222	1,630,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	223	1,640,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	224	1,650,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	225	1,660,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	226	1,670,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	227	1,680,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	228	1,690,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	229	1,700,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	230	1,710,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	231	1,720,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	232	1,730,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	233	1,740,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	234	1,750,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	235	1,760,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	236	1,770,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	237	1,780,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	238	1,790,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	239	1,800,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	240	1,810,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	241	1,820,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	242	1,830,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	243	1,840,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	244	1,850,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	245	1,860,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	246	1,870,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	247	1,880,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	248	1,890,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	249	1,900,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	250	1,910,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	251	1,920,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	252	1,930,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	253	1,940,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	254	1,950,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	255	1,960,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	256	1,970,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	257	1,980,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	258	1,990,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	259	2,000,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	260	2,010,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	261	2,020,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	262	2,030,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	263	2,040,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	264	2,050,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	265	2,060,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	266	2,070,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	267	2,080,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	268	2,090,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	269	2,100,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	270	2,110,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	271	2,120,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	272	2,130,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	273	2,140,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	274	2,150,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	275	2,160,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	276	2,170,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	277	2,180,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	278	2,190,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	279	2,200,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	280	2,210,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	281	2,220,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	282	2,230,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	283	2,240,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	
Full cream	284	2,250,000 <td>0.0<td>9<td>..<td></td></td></td></td>	0.0 <td>9<td>..<td></td></td></td>	9 <td>..<td></td></td>	.. <td></td>	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Cottrell.....	Full cream	55	4	60,000	10	8%	Yes...	and Durh'ms.
Collins	Full cream	60	7	100,000	10	8%	" "	rhams.
Trappin Brook	Full cream	60	2	.....	10	.....	" "	Jerseys.
Little Genesee.....	Full cream	53	6	60,000	10	8%	" "	and Durhams.
South Bollivar.....	Full cream	56	3	45,000	10%	9	" "	and Durhams.
Genesee Valley.....	Full cream	60	11	165,800	10	8%	" "	
East Friendship.....	Full cream	67	2	85,000	10	8%	" "	

NAME OF FACTORY.	Feed used by patrons.	With regard to	Thinks cheese would be soft and poor in quality.	None.	regard to tainted milk and the causes of the same.
Hume	Grass, sowed corn, mill feed, bran and middlings.	None.	Thinks cheese would be soft and poor in quality.	None.	
Babbitt	Grass, sowed corn, bran and meal.	"	Makes floating curd, poor quality of cheese.		hot weather; improper stirring or cooling milk
Starr	Grass, sowed corn, mill feed and bran	"	Would sour quicker, poor quality and makes a poor-flavored cheese.		ause, improper care of and taking proper care
East Centerville	Grass, sowed corn ..	"	Makes a sour smell or tainted milk, poor-flavored cheese.	none.	
Centerville	Grass, sowed corn, mill feed and bran	"	Makes a thin, poor quality of milk and a porous and bad-flavored cheese.	Have had some; cause, improper care of milk and cans; do not stir and cool the milk enough.	
Pochuck	Grass, sowed corn, bran and middlings	"	It would spoil it for cheese purposes.	Very little; cause, improper care of cans and not stirring or cooling milk sufficiently.	
Stone Spring	Grass, sowed corn, bran and meal.	"	It makes a thin, poor-flavored milk, a slippery curd and a porous, bad-flavored cheese.	Yes; cause, improper care of cans and the milk not stirred and cooled.	
Mills' Mills	Grass, sowed corn, bran and middlings	"	Makes it sour quicker and gives the cheese a tainted taste, bad flavor.	None.	
County Line	Grass, sowed corn, bran and middlings	"	Makes a thin, poor-flavored milk, a porous and bad-flavored cheese.		
Hardy's	Grass, bran meal and middlings.	"	Makes a poor quality of milk, a wet, porous and tainted cheese.		
Fish Creek	Grass, sowed corn, bran and middlings	"	and bad-milk for a		
Fillmore Comb. No. 2	Grass, sowed corn.	"	cheese;		
Fillmore Comb. No. 1	Grass, sowed corn, bran and middlings	"	rep well;		

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

With regard to feeding whey.

Rushford	Grass, sowed corn, bran and middl'gs	None.	Never worked any milk where the cows had been fed on whey; could not tell.	Yes; cause, hot weather. poor water and
Pearl Creek.....	Grass, meal, bran and middl'gs.	"	Poor quality, bad flavor, tainted and porous cheese.	drinking poor cans and milk.
Mount Monroe	Grass, sowed corn, meal and bran.	"	Makes a wet	None.
West Branch	Grass, sowed corn, bran and middl'gs	"	Never been fed potato	Yes; cause, improper care not stirring or cooling; kept too close.
Kellogg	Grass, sowed corn, oats and rye.	"		Yes; improper care of cans and milk
Podunk	Grass, sowed corn, bran and middl'gs	"	poor whey, r. spongy curd, poor-flavored	Yes; cause, improper care of milk and cans
Brookside	Grass, sowed corn, bran and middl'gs	"	Makes a poor quality of milk, sloppy cheese	Yes; cause, improper care of cans and milk
Grove	Grass, meal and br'n	"	ty.	Yes; cause, hot weather and improper care of cans and milk, not stirring or cooling.
East Granger ..	Grass, meal and br'n	"	as	None.
Birdedall	Grass.	"		Little; cause, improper care of milk and cans, not stirring or cooling sufficiently.
Empire	Grass, sowed corn, barley br. and mid	"		Yes; cause, improper care in not stirring or cooling, and letting whey stand all day in cans.
Short Track No. 8	Grass, ensilage, beets and turnips.	"	; effects it much in the milk, and flavor and would	Yes; cause, improper care of cans and milk; cows drinking stagnant water; not stirring.
West Hill	Grass and sowed o'n	"	Makes a thin and poor-flavored milk, a porous and b	None,
Canades	Grass, sowed corn, bran and middl'gs	"	Makes a poor milk.	Yes; cause, hot weather, poor water, im- proper care.
Ormal.....	Grass and sowed c'n	"	Do not know; never worked any milk where the cows had been fed on whey.	None.

Shonga	Grass, sowed corn and oats.	"	Makes a thin and poor-flavored milk; a	Yes; cause, hot weather; cattle drinking stagnant water; also eating weeds.
Houghton Creek	Grass and sowed corn.	"	y milk	Yes; cause, improper care of cans and milk.
Allen	Grass, mill feed, bran and middl'gs.	"	akes it	; not dipping
Angelica Union	Grass.	"	akes n	not stirring or
Transit Bridge	Grass, mill feed and bran.	"	milk; a	and cans.
Keystone	Grass, mill feed, meal and bran.	"	to hurt	Yes; cause, improper care; not stirring or dipping sufficiently.
Angelica	Grass, ground feed	"	apt to	None.
Caseville	meal s.	"	taint.	Yes; cause, hot weather. Improper care of cans and milk.
co Fargo	corn, and	"	Makes a poor quality of milk; slippery curd and a porous cheese, poor flavor.	None.
	middl'gs.	"	Makes a poor quality of milk; bad-flavored cheese.	
Black Creek	Grass, sowed corn, bran, meal and middl'gs.	"	Never worked any milk where cows had been fed whey; can not tell.	Very little; cause, improper care of milk and cans.
Sands	Grass, sowed corn, bran, meal and middl'gs.	"	Makes a poor quality of milk; sours quicker; poor-flavored cheese.	None.
New Hudson Center	Grass, sowed corn, bran, meal and middl'gs.	"	Could not tell; never worked any milk where the cows had been fed whey.	Yes; cause, improper care of cans, not stirring and cooling the milk.
Marshall	Grass and sowed corn.	"	Could not tell; never worked any milk where cows had been fed whey.	None.
Belfast	Grass, sowed corn, bran and meal.	"	Makes it gassy; poor quality.	None.
Able Baker	Grass and sowed corn.	"	Makes a thin and poor quality of milk; a bad-flavored cheese.	Yes; cause, improper care of cans and milk; cows drinking stagnant water.
White Creek	Grass, sowed corn, meal, bran and middl'gs.	"	Milk would be of a bad flavor; cheese would be porous, wet and poor.	Yes; cause, cows drinking impure water; also eating weeds.
Phillips Creek	Grass, sowed corn, oats and corn, ground.	"	Makes it sour; makes an open, slippery curd; an unhealthy cheese.	None.
Belmont	Grass and sowed corn.	"	milk where	None.
Nile	Grass.	"	not much	None.
Sherman	Grass and sowed corn.	"	of milk; a	Yes; cause, improper care; not stirring or cooling night's milk.
Halls, A. E.	Grass, sowed corn, oats, bran and middl'gs.	"	cheese, not tell.	Yes; cause, improper care; not stirring and cooling the milk sufficiently.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Five Corners	Grass, sowed corn, meal and bran.	None.	..; makes slip-	Yes; cause stirring a
East Hill	Grass, sowed corn, millet and bran.	"	a porous and	Very little; not being
North Cuba	Grass and green corn.	"	t, porous and	removed, cows drinking
Amsden's	Grass, sowed corn, bran	"	poor quality of cheese.	Yes; cause, hot weather; impure water.
South Cuba	Grass, sowed corn, bran	"	Makes a poor quality of milk, a slippery	Very little; cause, cans being left during
Cuba Valley	Grass, sowed corn, meal	"	curd and a porous, poor-flavored cheese	.., night near a manure heap.
	mill feed and bran	"	.....	.. cans set where there is
Keller Hill	Grass, sowed corn, bran, meal and middlings	"	Makes a poor quality and bad-flavored milk; a wet, poor-flavored and porous cheese.	.. it cooling the milk.
McHenry Valley	Grass, sowed corn, meal and bran.	"	It would sour quicker; make a porous and poor-flavored cheese.	.. cause, hot weather; im-
Karr Valley	Grass, meal, bran middlings.	"	Makes a tainted cheese; bad flavor.	lk and cans.
West Almond	Grass, sowed corn, bran and midl'gs	"	Makes frothy curd; poor-flavored cheese.	Yes; cause, improper care; not stirring
Almond	Grass, sowed corn, meal and bran.	"	No substance in the milk, makes porous cheese; poor quality	night's milk.
Lafferty	Grass, sowed corn, oats, br. and midl.	"	Makes a porous, tainted and poor quality of cheese.	None.
Rice	Grass, sowed corn, mill feed, o'ts & p's	"	Would make the milk sour quicker; poor quality makes a wet, poor-flavored cheese	Yes, once; cause, not feeding salt.
Forest	Grass, sowed corn, bran and midl'gs	"	Would have same effect as watering the milk.	Yes; cause, bad water occasioned by hot weather.
West Clarksville	Grass, sowed corn, ground feed, bran and middlings.	"	It would make tainted milk and cheese of bad flavor.	None.
		"	Makes thin and poor quality of milk, a porous and bad-flavored cheese.	Yes; cause, negligence of patrons not stirring and cooling their milk.
		"		Yes; cause, impure water drank by cows
		"		and not stirring the night's milk.
		"		Yes; cause, improper care of cans and milk, not stirring or cooling.
		"		Yes; cause, improper care of cans and milk, fast driving of cows.

			Taints the milk, makes poor cheese.	Yes; cause, improper care, not stirring the milk.
Spring Mills			Can a milk where	None.
Wildman			cow: poor quality.	Very little; cause, hot weather, improper care of milk and cans.
Clark, H. M.			Make milk where	None.
Cryder Creek			Can milk where	Yes; cause, improper care of cans and milk.
Hallsport			Do milk where	
Andover	millet, bran and middlings.		Can not tell; never worked any milk where cows were fed on whey.	milk and
Richburgh	Grass, sowed corn, meal and bran.		I can't tell what effect it would have. I have never used such milk.	drinking cows fast in old
Solo, No. 1	Grass and sowed corn.		quicker cheese a bad	moving the
Smith's	Grass.		sour in more of cheese.	pe by dip-
Allentown	Grass.		I can't say how it would affect the milk.	
Elm Valley	Grass, sowed corn, millet and bran.		Very poor quality of milk; a porous and tainted cheese.	and poor water.
East Valley	Grass, bran and middlings.		Do not know, never had any experience.	None.
Pleasant Valley	Grass, sowed corn, bran and middlings		Can not say; never worked any milk where cows had been fed on whey.	Yes; cause, hot weather, cows eating weeds, drinking impure water and improper care of cans and milk.
Vandermark	Grass and sowed corn.		wet, porous and poor-	Yes; cause, improper care of cans and milk.
Cottrell	Grass, sowed corn, bran and meal.		if worked any milk where cows had been fed on whey.	Yes; cause, improper care of cans and milk.
Collins	Grass, sowed corn, bran and middlings		Do not know; never worked any milk where cows had been fed on whey.	Yes; cause, improper care, not stirring or cooling the milk.
Trappin Brook	Grass, sowed corn.		Can not tell; never worked any milk where the cows had been fed on whey.	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1883 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Little Genesee	Grass.	None.	The milk of cows fed on whey would taint quickly and the cheese made from such milk does not have characteristic flavor, and it is puffy and very porous. I can't tell how it would affect the milk.	I have had some; cause, neglect of the patrons to dip the milk to allow the animal heat to pass off, especially in hot weather.
South Bolivar	Grass.	"	Do not know; never worked any where the cows had been fed on whey. Can not tell; never worked any where the cows had been fed on whey.	Have had some; cause, neglect by patrons to dip and aerate the milk, also from carrion near where milk sets during the night. Yes; cause, impure water, improper care of cans and milk. Yes; cause, milk.
Genesee Valley	Grass, sowed corn, bran and middlings.	"		
East Friendship	Grass, meal and bran.	"		

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ALLEGANY COUNTY — (Continued).

NAME OF FACTORY.	There is; but do not know how it can be	Good.....	On high ground.	Good.....	.....
Hume	There is; but do not know how it can be	Good.....	On high ground.	Good.....	.....
Babbitt.....	There is; but do not know how it can be	"	Good.....	" .....	.....
Start.....	There is; but do not know how it can be	"	"	Poor.....	.....
East Centerville	There is; but do not know how it can be	"	"	Good.....	.....
Centerville.....	There is; but do not know how it can be	Poor.....	" .....	" .....	.....
Pochuck.....	There is; but do not know how it can be	Good.....	" .....	" .....	.....
Stone Spring.....	There is; but do not know how it can be	" .....	" .....	" .....	.....
Mills' Mills.....	There is; but do not know how it can be	" .....	" .....	" .....	.....
County Line	There is; but do not know how it can be	" .....	" .....	" .....	.....
Hardy's.....	There is; but do not know how it can be	" .....	" .....	" .....	.....
Rush Creek.....	There is; but do not know how it can be	"	"	Poor.....	.....
Fillmore Comb., No. 2.....	There is; but do not know how it can be	"	"	Good.....	.....
Fillmore Comb., No. 1.....	There is; but do not know how it can be	" .....	" .....	" .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888--ALLEGANY COUNTY--(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Rushford.....	There is a difference; could not tell how it	Good.....	Good.....	Good.....	.....
Pearl Creek.....	quality of milk it not enough to raise any question among our patrons.	".....	".....	".....	.....
Mount Monroe.....	There is a difference; could not tell how it could be	Poor.....	".....	".....	.....
West Branch.....	known how it could be	Good.....	".....	".....	.....
Kellogg.....	do not know how it	".....	".....	".....	.....
Podunk.....	light that I would not to raise any question	".....	".....	".....	.....
Brookside.....	now how it could be	".....	".....	Fair.....	.....
Grove.....	now how it could be	".....	".....	Good.....	.....
East Granger.....	analyses or tests.	".....	".....	".....	.....
Birdsall.....	now how it could be	".....	".....	".....	.....
Empire.....	now how it could be	".....	".....	".....	.....
Short Track, No. 3.....	now how it could be	".....	".....	".....	.....
West Hill.....	se in the quality of the milk, the cows and pastures are about same.	".....	".....	Fair.....	.....
Canada.....	There is a difference; but do not know how to adjust it.	".....	".....	Good.....	.....
Ormal.....	Can not see any difference; the cows are all the same kind and pastures nearly alike.	".....	".....	".....	.....
Songa.....	There is but very little difference, not enough to raise any question among our patrons.	".....	".....	".....	.....

Houghton Creek.....	"	.....	"	.....	"	.....
Allen .....	"	.....	"	.....	"	.....
Angelica Union.....	"	.....	"	.....	"	.....
Transit Bridge .....	"	.....	"	.....	"	.....
Keystone .....	"	.....	"	.....	"	.....
Angelica .....	"	.....	"	.....	"	.....
Caseville .....	"	.....	"	.....	"	.....
Fargo .....	"	.....	"	.....	"	.....
Black Creek.....	"	.....	"	.....	Very poor..	.....
Sands .....	"	.....	"	.....	Good.	.....
New Hudson Centre.....	"	.....	"	.....	"	.....
Marshall .....	"	.....	"	.....	"	.....
Belfast .....	"	.....	"	.....	"	.....
Able Baker.....	Poor	.....	"	.....	Poor	.....
White Creek	Good.....	.....	"	.....	Good.....	.....
Phillips Creek .....	"	.....	"	.....	Poor	.....
Belmont.....	"	.....	"	.....	First class.	.....
Nile.....	"	.....	"	.....	Good.....	.....
Sherman .....	"	.....	"	.....	"	.....
Halls, A. E.....	"	.....	"	.....	"	.....
Five Corners.....	"	.....	"	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ALLEGANY COUNTY—(Continued).

	There is a slight difference: do not know	Good.....	Good.....	Good.....	Good.....	Good.....
East Hill		Good.....	Good.....	Good.....	Good.....	Good.....
North Cuba		"	"	"	"	"
Amsdens		"	"	"	Fair.....	"
South Cuba		"	"	"	Good.....	"
Cuba Valley		"	"	"	"	"
Keller Hill		"	"	"	"	"
McHenry Valley		Poor	Poor	On dry gr'd.	Very poor	"
Kerr Valley		Good.....	Good.....	Good.....	Good.....	"
West Almond		"	"	"	"	"
Almond		"	"	"	"	"
Lafferty		"	"	"	Poor	"
Rice		"	"	"	Good.....	"
Forest		"	"	"	"	"
West Clarkevile		"	"	"	Poor	"

trons.
 There is but very little difference; have no idea how it could be equalized or adjusted.
 There is a difference; do not know how it could be equalized or adjusted.
 There is a difference; do not know how it could be equalized.
 There is quite a difference; it can not be equalized or adjusted.
 There is a difference, but do not know how it can be equalized or adjusted.

Spring Mills	"	"	"	Good.....	.....
Wildman	"	"	"	First-class.	.....
Clerk, H. M.	"	"	"	Good.....	.....
Cryder Creek.....	"	"	"	"	.....
Hallsport	"	"	"	First-class.	.....
Andover.....	"	"	"	"	.....
Richburgh .....	"	"	"	"	.....
<p>quality and value of pure milk; I can not think of any means of equalizing differences.</p>					.....
Selo, No. 1.....	"	"	"	"	.....
Smith's.....	"	"	"	"	.....
Allentown.....	"	"	"	"	.....
Elm Valley.....	"	"	"	Good.....	.....
East Valley .....	"	"	"	"	.....
Pleasant Valley .....	"	"	"	"	.....
Vandermark.....	"	"	"	"	.....
Cottrell.....	"	"	"	"	.....
Collins .....	"	"	"	"	.....
Trappin Brook .....	"	"	"	"	.....
Little Genesee	Fair.....	"	"	"	.....
South Bolivar	Good.....	Fair.....	"	Fair.....	.....
Genesee Valley.....	"	Good.....	"	Good.....	.....
East Friendship.....	Good.....	Fair.....	"	Poor .....	.....

but can't tell how

but can't tell how

our patrons are in it advisable to raise questions in regard thereto

There is a difference, but do not know how it could be adjusted

Can not tell, as I have nothing to test milk

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ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — BROOME COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Lisle Creamery.....	Lisle.....	July 27	Butter and cheese.....	9	80	500	4,900	26	9,425	25	20
.....	Lisle.....	28	.....	4½	17	150	4,200	100	10,000	40	23½
.....	Maine.....	28	Butter.....	9	30	200	*200	200	30,000	25	20
.....	Nanticoke.....	28	Butter and cheese.....	6½	37	550	6,000	100	38,600	25	20
.....	Triangle.....	28	.....	6	7	200	8,000	25	8,750	26	22
.....	Triangle.....	30	.....	6	81	558	8,000	125	22,500	30	21
.....	Castle Creek.....	30	Butter.....	7	60	800	Cream	525	20,800	18-25	26
.....	Triangle.....	31	Butter and cheese.....	6½	17	200	3,500	50	8,250	75	20
.....	Whitney's Point.....	31	Butter.....	12	10	130	3,000	20	7,800	40	16
.....	Whitney's Point.....	August 1	Cheese.....	6	94	550	6,000	.....	.....	.....	.....
.....	Fenton.....	.....	Butter.....	6	100	1,300	Cream	700	50,000	20	20
.....	Binghamton.....	2	.....	12	9	140	3,000	14	6,000	25	25
.....	Binghamton.....	3	Butter and milk.....	12	14	200	3,000	75	37,375	23	28
.....	Binghamton.....	3	Butter.....	12	25	400	6,000	.....	.....	.....	.....
.....	Windsor.....	9	Cheese.....	6	26	200	3,100	50	9,000	70	26
.....	Windsor.....	10	Butter and cheese.....	6	33	280	5,500	.....	.....	.....	.....
.....	Coldsville.....	11	Cheese.....	5	.....	.....	.....	.....	.....	.....	.....
.....	Windsor.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Cream.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — BROOME COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State	
Lisle Creamery. Canton Falls	Skim.....	40	8	73,000	10	8%	.....	Native.
	Half-skim.....	47	8	56,600	13½	.....	.....	Native.
	Night skim.....	55	9	89,000	10	8%	.....	Native, Jerseys and Holsteins.
	Night skim.....	48	6	46,000	10	8%	No....	Native and Jerseys.
	Pound skim.....	50	18	125,000	10½	8	Yes..	Native.
	Night skim.....	52	4-6	42,900	11½	7%	.....	Native and Jerseys.
	Pot cheese.....	.....	.....	.....	.....	.....	.....	Native, Jerseys and Holstein.
	Full cream.....	45	14	100,000	9½	8%	Yes..	Native.
	.....	.....	.....	.....	.....	.....	.....	Native.
	.....	.....	.....	.....	.....	.....	.....	Native.
	.....	.....	.....	.....	.....	.....	.....	Native.
	Full cream.....	48	13	105,300	9%	11½	.....	Native and Jersey.
	Night skim.....	53	5	47,700	8	7	Yes..	Native and Jersey.
	Full cream.....	39	11	77,220	9%	8%	No....	Native and Jersey.
	.....	.....	.....	.....	.....	.....	Yes..	Native and Jersey.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—BROOME COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Lisle Creamery..... Center Lisle.....	.....	Good.....	Good..... High & dry	Good..... Drain 400 ft. to creek	Found the milk in good shape, cans clean, and farmers well pleased to see milk inspector looking after milk.
Acme Creamery.....	.....	".....	".....	Good.....	.....
Lamb's Corners..... Stillwater.....	Patrons could be paid according to the percentage of cream by the use of the test churn.	"..... Poor..... Good.....	Good..... Good.....	"..... Poor..... Good.....	..... Has blind drainage to the river.
..... Binghamton Creamery.....	There is a difference.....	"..... Near depot Good..... 14 Court st. Bingh'ton 161 Court st. Bingh'ton	"..... Near depot Good..... 14 Court st. Bingh'ton 161 Court st. Bingh'ton	Good..... Good..... "..... ".....	..... Milk depot, sell wholesale to peddlers; in city retail out of store, and make balance in butter.
Carver's Creamery..... Windsor Creamery Co.....	No difference..... No difference.....	"..... ".....	7 Main st. Bingh'ton Good.....	"..... To river.....	..... Considerable trouble with milk. Lec. 104 at sixty degrees F.
Onaquaga..... West Windsor.....	No difference..... No difference.....	"..... ".....	"..... Fair.....	Fair..... Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY. — (Continued).

NAME OF FACTORY.	Town.	When Inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Haskell Flats.....	Hinsdale.....	July 14	Cheese.....	7	37	446	9,000	..	..	..	..
.....	Portsville.....	14	"	6	33	330	6,000	..	..	..	..
.....	Ellicottville.....	14	"	6	16	400	7,500	..	..	..	..
.....	Ellicottville.....	14	"	6	22	350	7,000	..	..	..	..
.....	Portsville.....	16	"	6	23	130	2,800	..	..	..	..
.....	Portsville.....	16	"	6	41	350	8,000	..	..	..	..
.....	Hinsdale.....	17	"	7	25	321	7,500	..	..	..	..
O. 9.....	Hinsdale.....	17	"	5½	15	240	2,600	..	..	..	..
.....	Mansfield.....	17	"	6	18	275	4,400	..	..	..	..
.....	Mansfield.....	17	"	6	25	200	4,000	..	..	..	..
.....	Mansfield.....	17	"	6	10	162	3,000	..	..	..	..
.....	Ashford.....	18	"	6	30	350	6,400	..	..	..	..
.....	Ellicottville.....	18	"	6	20	400	6,000	..	..	..	..
.....	Allegany.....	20	"	6	15	175	2,900	..	..	..	..
.....	Allegany.....	20	"	6	21	250	4,500	..	..	..	..
.....	Allegany.....	21	"	6	24	300	6,000	..	..	..	..
.....	Allegany.....	21	"	6	23	360	6,000	..	..	..	..
.....	Allegany.....	21	"	6	35	575	12,000	..	..	..	..
.....	Lyndon.....	21	"	7	37	600	14,500	..	..	..	..
.....	Franklinville.....	21	"	7	18	212	5,000	..	..	..	..
.....	Allegany.....	21	"	6	33	480	7,000	..	..	..	..
.....	Allegany.....	23	"	6	31	250	4,800	..	..	..	..
.....	Great Valley.....	23	"	6	20	320	6,000	..	..	..	..
.....	Great Valley.....	23	"	6	15	200	3,800	..	..	..	..
.....	Napoli.....	23	"	6½	37	300	6,500	..	..	..	..
.....	Napoli.....	23	"	7	25	250	5,600	..	..	..	..
.....	Napoli.....	23	"	6	18	200	3,600	..	..	..	..
.....	Napoli.....	23	"	7	29	350	8,000	..	..	..	..
.....	Little Valley.....	23	"	7	27	300	5,200	..	..	..	..

July	August	Product	Grade	Weight	Value	Count	Weight	Value	Count
Little Valley	23	Cheese	6	1,200	50	13	1,200	50	13
Little Valley	23	"	6	3,500	200	54	3,500	200	54
Mansfield	23	"	6	16,000	860	13	16,000	860	13
Little Valley	23	"	6	2,850	200	23	2,850	200	23
Otto	23	"	6	8,800	440	25	8,800	440	25
Otto	23	"	6	4,900	275	25	4,900	275	25
Otto	24	"	6	6,600	350	20	6,600	350	20
East Otto	24	"	6	5,000	278	23	5,000	278	23
Elliotville	24	"	6	6,500	385	25	6,500	385	25
Ashford	24	"	6	7,000	430	21	7,000	430	21
Machias	25	"	6 1/2	6,500	428	31	6,500	428	31
Machias	25	"	6	6,800	400	21	6,800	400	21
Farmersville	25	"	7	4,200	235	10	4,200	235	10
Farmersville	25	"	7	2,600	135	17	2,600	135	17
West Salamanca	25	"	6	2,000	130	10	2,000	130	10
Ashford	25	"	7	2,050	130	30	2,050	130	30
Ashford	26	"	7	9,000	445	23	9,000	445	23
Farmersville	26	"	7	4,000	200	45	4,000	200	45
Humphrey	26	"	6 1/2	6,500	450	14	6,500	450	14
Machias	26	"	6	2,100	144	28	2,100	144	28
Humphrey	26	"	6	6,500	375	30	6,500	375	30
Humphrey	26	"	7	6,500	375	26	6,500	375	26
Machias	26	"	6	7,000	450	26	7,000	450	26
Farmersville	26	"	6	6,200	350	40	6,200	350	40
Gold Spring	27	"	6	10,500	575	60	10,500	575	60
Randolph	27	"	7	7,000	34	34	7,000	34	34
Randolph	27	"	6	6,000	350	44	6,000	350	44
East Otto	27	"	6	11,000	550	40	11,000	550	40
East Otto	27	"	6	4,200	250	12	4,200	250	12
Yorkshire	27	"	7	6,700	32	32	6,700	32	32
Conewango	28	"	6	4,000	252	18	4,000	252	18
Conewango	28	"	6	7,500	30	30	7,500	30	30
East Otto	28	"	7	8,400	320	10	8,400	320	10
Conewango	28	"	7	9,800	300	15	9,800	300	15
Conewango	28	"	7	6,000	400	28	6,000	400	28
Gold Spring	28	"	6	3,000	175	18	3,000	175	18
Ashford	28	"	6	2,900	19	19	2,900	19	19
Ashford	28	"	7	4,190	260	17	4,190	260	17
Conewango	28	"	6	4,500	240	21	4,500	240	21
East Otto	28	"	6	1,040	255	18	1,040	255	18
East Otto	29	"	7	9,363	579	39	9,363	579	39
Freedom	3	"	6 1/2	6,000	31	31	6,000	31	31
Leon	3	"	6	3,900	11	11	3,900	11	11
Dayton	3	"	6	7,600	28	28	7,600	28	28
Dayton	3	"	6 1/2	3,500	14	14	3,500	14	14
Dayton	3	"	6	4,700	26	26	4,700	26	26
Dayton	3	"	6	3,920	14	14	3,920	14	14

ABSTRACT OF FACTORY INSPECTION FOR 1888—CATARAUGUS COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.
Markham's	Dayton ..	August 3	Cheese ..	8	36	312	5,600	...	...	...	...
.....	Perrysburgh ..	4	"	6	14	163	2,300	...	...	...	...
.....	Perrysburgh ..	4	"	9	12	189	3,200	...	...	...	...
.....	Perrysburgh ..	4	"	9	21	176	2,900	...	...	...	...
.....	Perrysburgh ..	4	"	7	42	450	7,000	...	...	...	...
.....	New Albion ..	6	"	7	26	310	4,807	...	...	...	...
.....	New Albion ..	6	"	6	29	375	5,200	...	...	...	...
.....	New Albion ..	6	"	6	18	300	3,800	...	...	...	...
.....	Ischua ..	7	"	8	25	380	6,500	...	...	...	...
.....	Leon ..	7	"	6	31	300	5,430	...	...	...	...
.....	New Albion ..	6	"	6	21	320	4,400	...	...	...	...
.....	Leon ..	7	"	7	14	288	2,626	...	...	...	...
.....	Leon ..	7	"	6	28	480	5,062	...	...	...	...
.....	Leon ..	7	"	8 1/2	24	270	3,893	...	...	...	...
.....	Franklinville ..	8	"	7	15	226	2,900	...	...	...	...
.....	Franklinville ..	8	"	6	9	178	2,450	...	...	...	...
.....	Franklinville ..	8	"	6	21	350	5,709	...	...	...	...
.....	Farmersville ..	8	"	6	33	400	5,301	...	...	...	...
.....	Franklinville ..	8	"	6	23	450	5,400	...	...	...	...
.....	Lynden ..	9	"	6	17	200	2,900	...	...	...	...
.....	Farmersville ..	9	"	6	20	250	4,500	...	...	...	...
.....	Lynden ..	9	"	7	21	300	4,100	...	...	...	...
.....	Lynden ..	13	"	7	25	280	4,800	...	...	...	...
.....	Freedom ..	14	"	7	31	396	5,042	...	...	...	...
.....	Persia ..	14	"	7	14	200	2,906	...	...	...	...
.....	Yorkshire ..	14	"	6	15	95	1,500	...	...	...	...
.....	Yorkshire ..	14	"	6	16	176	2,200	...	...	...	...
.....	Freedom ..	14	"	8	28	400	5,500	...	...	...	...

McKinster Hollow.....	Yorkshire.....	14	"	.....	6	31	235	2,357	.....	.....	.....
Yorkshire Center.....	Yorkshire.....	14	"	.....	6	33	639	8,000	.....	.....	.....
Randusky, No. 3.....	Freedom.....	15	"	.....	6½	23	300	4,630	.....	.....	.....
Freedom.....	Freedom.....	15	"	.....	7	28	425	5,630	.....	.....	.....
Siloam.....	Farmersville.....	15	"	.....	7	30	525	7,500	.....	.....	.....
Broadway.....	Persla.....	16	"	.....	5	10	100	1,600	.....	.....	.....
Studleys, J. A.....	Ashford.....	21	"	.....	6	9	140	1,593	.....	.....	.....
Springville, No. 4.....	Ashford.....	21	"	.....	7	20	235	4,100	.....	.....	.....
Demmons, J.....	Ashford.....	21	"	.....	7	12	150	2,400	.....	.....	.....
Otto Union, No. 1.....	Otto.....	27	"	.....	6	16	390	3,500	.....	.....	.....
		Sept.									

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Haskell Flats	White, full cream	60	12	160,000	10	9	Various breeds and Holsteins.
Lower Haskell	Full cream	56	11	100,000	10.25	9	
Vinton Stand	Full cream	60	11	100,800	10½	9	
Ellicottville	Full cream	60	11	112,800	10½	9	
Mill Grove	Full cream	55	5	97,000	10¾	8¾	
Hopkins	Full cream	58	12	100,000	10	9	
Hinsdale	Full cream	60	10	90,000	10.25	9	
Franklin Comb., No. 9	Full cream	62	4	34,000	9.90	9	
Lime Brook, No. 4	Full cream	40	11	55,000	10	9	
Mansfield, No. 1	Full cream	40	11	57,600	10.25	9	
Mansfield, No. 2	Full cream	60	5	64,500	10¾	9	Ayrshire, Durham, and short-horns.
West Valley	Full cream	60	10	117,000	10½	9	
Beaver Meadow, No. 16	Full cream	60	10	86,400	10¾	9	
Four Mile Union	Full cream	58	6	50,000	10	9	
Allegheny Union	Full cream	60	8	78,000	10	8¾	
Franklinville Comb., No. 8	Full cream	59	8	75,000	10	9	
Head of Five Mile Comb., No. 7	Full cream	62	10	98,000	10.3	9	
Lyndon	Uncolored, full cream	58	22	200,000	10	9	
Franklinville, No. 2	Colored, full cream	62	17	200,000	10	9	
Wilson	Colored, full cream	58	9	90,000	9.95	9	
Sheldon's	Colored, full cream	58	13	100,000	10	9	Native, Durham and Holstein.
Bandusky, No. 12	Colored, full cream	60	7	70,000	10½	9	
Sommerville	Full cream	60	10	90,000	10½	9	
Great Valley	Full cream	45	7	46,000	9	8¾	
South Napoli	Full cream	60	10	95,000	10	9¾	
Sibley	Full cream	33	16	100,000	10.31	9¾	
Narrows	Full cream	59	6	35,000	10¼	8¾	
Spring Valley	Full cream	60	11	120,000	10.47	9	
Little Valley Center	Full cream	58	9	70,000	10.33	8¾	
Mack	Full cream	55	2	16,000	10	9¾	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Rug Town	Full cream	3	46,000	10	8½	Yes	Holstein, Jerseys, native.
Dewey	Full cream	5	58,000	10½	9	No	Various.
Ticknor	Colored; full cream ..	5	52,000	10.09	9	No	Various breeds.
Perrysburgh	Colored; full cream ..	11	129,000	10½	8½	Yes	Natives.
Chaplain, No. 1	Full cream	7	105,000	10	8½	"	Grades and common cattle.
New Albion	Full cream	8	100,000	10½	8½	"	Various breeds.
Pritchard	Full cream	9	80,000	10½	8½	Yes	Various.
Sheldon Home	Full cream	14	150,000	9.90	9½	"	Natives.
Leon	Full cream	9	92,000	10	8½	"	Various.
Cattaraugus, No. 2	Full cream	7	80,000	10½	9	"	Various.
North Leon	Full cream	5	55,000	10	9	Yes	Holstein, Jerseys and natives.
Leon Center	Full cream	8	78,000	10	8½	"	Holstein, Jerseys and natives.
Peace Vale	Full cream	7	54,000	10	8½	No	Various.
Rock Springs, No. 4	Full cream	5	90,000	10.24	9	Yes	Holstein and Jerseys.
Holden Rock Spr'gs, No. 5 ..	Full cream	3	80,000	10.23	8½	"	Holstein, natives and Jerseys.
Cadiz Union	Full cream	9	120,000	10.25	9	"	Holstein, natives and Jerseys.
Franklinville, No. 5	Full cream	8	121,000	10	9	No	Native, grade and Durhams.
Ferriington, No. 1	Full cream	10	125,000	10½	9	Yes	Holstein, Jerseys and natives.
Franklinville, No. 11	Full cream	5	60,000	10.1	9	"	Various.
Sandusky, No. 9	Full cream	7	120,000	10	9	"	Various.
Elgin	Full cream	7	80,000	10.10	9	Yes	Holsteins, Jerseys and natives.
Abbots, No. 2	Full cream	9	117,000	10	9	"	Holsteins and natives.
Sandusky, No. 1	Full cream	7	96,000	10	8½	"	Native, Jerseys and Holstein.
Snydia	Full cream	3	45,000	10.50	8½	"	Durham, Holstein and native.
West Yorkshire	Colored; full cream ..	2	29,000	10	8½	Yes	Different herds.
Block	Colored; full cream ..	4	40,000	10	8½	"	Native, Durhams and Ayrshires.
Sandusky, No. 5	Colored; full cream ..	8	105,000	10	8½	"	Grades, natives.
McKinster Hollow	Full cream	4	55,000	10	8½	"	Jerseys, natives and Holstein.
Yorkshire Center	Colored; full cream ..	11	169,000	10	9	"	Various.

Sandusky, No. 3.....	Colored; full cream ..	61	7	90,000	10	8%	" ..	Holstein, Jerseys and natives.
Freedom	Colored; full cream ..	62	9	125,000	10.20	9	" ..	Various.
Siloam	Colored; full cream ..	62	12	160,000	10	8%	" ..	Various.
Broadway	Full cream	60	3	25,000	10	9	" ..	Various.
Studleys, J. A.....	Full cream	30	5	22,000	10	8%	.....	Various.
Springville, No. 4....	Colored; full cream ..	60	6	75,000	10%	8%	.....	Various.
Demmons, J.....	Colored; full cream ..	35	6	60,000	10%	9	Yes...	Various.
Otto Union, No. 1	Colored; full cream ..	60	6	110,000	10%	9	" ..	Grade, Holst., Jerseys, Ayrshires and natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CATARAUGUS COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.
Haskell Flats	Corn meal, bran and middlings.	Non
Lower Haskell	Grass.	"
Vinton Stand.....	Grass.	"
Elliotville.....	Grass.	"
Mill Grove.....	Grass, corn fodder.	"
Hopkins	Grass & sowed corn.	"
Hinsdale.....	Grass.	"
Franklinville Comb., No. 9...	Grass.	"
Lime Brook, No. 4.....	Grass.	"
Manasfield, No. 1	Grass, sowed corn, bran and middlings.	"
Manasfield, No. 2	Grass.	"
West Valley	"	"
Beaver Meadow, No. 16.....	"	"

Four Mile Union	Grass.	"	I can not tell; I never used such milk in making cheese.	Have had some; cause, I think it resulted chiefly from not caring for the milk properly; it should be dipped and aerated, and when set during the night in can, it should not be covered tightly.
Allegheny Union	Grass.	"	I have never worked such milk; I can not say how it would be affected.	Have had some; cause was by patrons not dipping the milk after milking and, in several cases, from the cows being in an
Franklinville Comb., No. 3..	Grass.	"	The milk of cows fed on whey is greater in quantity, but of an inferior quality; is acidulous, and sours quickly.	
H'd of Five Mile Comb., No. 7	Grass.	"	The milk of cows fed on whey would be of an inferior quality, and would sour quicker than wholesome milk.	
Lyndon	Grass.	"	If	the milk is made in a bad
Franklinville, No. 2.....	Grass.	"	T	greater and the not the
Wilson	Grass.	"	I can not say; never worked milk where whey has been fed.	
Sheldon's	Grass.	"	I can not tell; have never had any experience with such milk.	
Sandusky, No. 12	Grass, meal and br'n	"	It makes poor-flavored milk, a slippery curd and poor and porous cheese.	improper care of cans and milk. None.
Sommerville.....	Grass, meal and br'n	"	It would give the milk a bad flavor and make a poor quality of cheese.	Ve
Great Valley.....	Grass, meal and br'n	"	Reduces the quality, makes a poor-flavored cheese.	Y
South Napoli	Grass and grain.	"	If fed, would injure the flavor of the cheese and cause gas to form in the cheese and make it spoil easily.	milk; cans operly nd by lking; m. etc.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effects of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Sibley	Grass.	None.	Do not know; never had any experience with whey-fed milk.	Have had; cause, not being stirred often
Narrows	Grass.	"	Can not say, as I never knew of any being fed.	
Spring Valley	Grass.	"	If fed, it would injure the flavor and texture of the cheese.	
Little Valley Center	Grass.	"	If fed, think it would be injurious to the milk and cheese.	
Mack	Grass.	"	Never had any experience where whey was fed; but think it causes the cheese to spoil quickly.	
Little Valley.	Grass, corn and fodder.	"	Think it would make thin and poor milk and cause the cheese to puff and become sour.	
Manesfield	Grass.	"	Makes a thin and poor quality of milk	Yes; cause, hot weather and thunder showers.
Brooks	Grass.	"	If fed, think it injures the texture and flavor of the cheese.	No; cause, cows eating certain weeds and drinking impure water, and also by the patrons not taking proper care of the milk.
Otto	Grass.	"	Makes a thin and poor-flavored milk.	None.
Lime Brook, No. 1	Grass.	"	Make a thin and poor quality of milk; a tainted and	None.
Plato Union	Grass.	"	Do not know;	None.
East Otto, No. 6	Grass.	"	Makes a poor	None.
Vedder	Grass.	"	Do not know.	Yes; improper care of milk and cans.
Bellas	Grass.	"	Makes poor quality of milk; tainted cheese.	Yes; cause, improper care of cans and milk.
Baker, Stand No. 2	Grass.	"	Makes poor quality; tainted.	None.

Rock Spring, No. 3	Grass.	"	Could not say; had no experience.	Yes: improper care of milk and cans; hot weather.
Farmersville, No. 2	Grass.	"	" " " milk; a wet, case.	None.
State Line	Grass.	"	" " " much milk.	Yes; cause, hot weather, thunder storms.
Bucktooth	Grass, bran and meal.	"	" " " is the milk is	Have had some; cause, by not being sufficiently cooled, and not having good water and poorly fed.
Clair Bros., No. 3	Grass.	"	" " " unpleasant	Yes; cause, improper care of cans and milk.
Riceville	Grass.	"	" " " flavor; makes a porous cheese and requires more milk for a pound of cheese.	Yes; cause, improper care of cans and milk.
Farmersville, No. 1	Grass.	"	" " " Do not	None.
Franklinville, No. 3	Grass.	"	" " " where a	
		"	" " " Makes a porous	
		"	" " " Makes a poor quality and a wet bad-flavored cheese.	
		"	" " " The milk of cows fed on whey will be greater in quantity but of an inferior quality; it is acidulous and will sour quickly.	
Bellas, No. 3	Grass.	"	" " " Makes a thin, poor quality of milk.	
Bandusky, No. 10	Grass and meal.	"	" " " The milk of cows fed on whey makes a wet cheese that will run sour on the shelf after coming out of the hoops.	
Franklinville Comb., No. 4	Grass.	"	" " " he milk of cows	
		"	" " " re odor and poor	
White School-House	Grass.	"	" " " would take more	aired.
Rock Spring, No. 1	Grass.	"	" " " worked any milk	Yes; cause, improper care of cans and milk.
		"	" " " d to cows,	Have had; cause, patrons neglecting to dip it to allow the animal heat to escape.
Bandolph Comb., No. 1	Grass, sowed corn, bran and middlings.	"	" " " the cheese made	
		"	" " " puffy, and would	
		"	" " " k: a porous and	
Bandolph Comb., No. 2	Grass, bran and middlings.	"	" " " It makes a slippery, porous and poor-flavored cheese.	Had some; cause, have had several cans of tainted milk which was thick, coagulated as curd, but not containing any acid; unclean cans, improper care of milk.
Bandolph Comb., No. 3	Grass, sowed corn, bran and middlings.	"	" " " Increase the flow of milk and make poor quality of milk; poor-flavored cheese.	Have had; cause, not stirring and getting rid of animal heat, improper care of cans and pails.
Sample Hill	Grass, mill feed, bran and middlings.	"	" " " It would sour quicker, be more acid, and poor quality.	Have had; cause, shiftlessness on part of patrons not stirring or cooling the milk, improper care of cans.
		"		Yes; cause, cows eating leeks.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey on milk.	With regard to tainted milk and the causes of the same.
East Otto, No. 2	Grass.	None.	Makes a thin, poor quality of milk; a cheese.	None.
Brooklyn, No. 4	Grass.	"	Milk; a porous.	Yes; cause, warm weather and sour cans.
Yorkshire	Grass, meal and bran.	"	It would not be wet.	None.
Axville	Grass, sowed corn, bran and middlings.	"	7 milk if they	Have had; cause, animal heat not removed by stirring and cooling the milk.
Randolph Comb., No. 4	Grass, sowed corn, bran and middlings.	"	any milk where	None.
Fry, No. 2	Grass.	"	experience.	None.
Highland	Grass, bran, corn and oats, mixed middlings.	"	Milk; a wet and	Yes; cause, improper care during a warm night; not stirred sufficiently.
Elm Creek Creamery	Grass, sowed corn, bran and middlings.	"	Do not know; think it would increase the flow of milk, but do not think it would do	Yes; cause, cows overheated by fast driving; milk put in cans while hot, and not stirred or cooled sufficiently.
Brown, Wm. M., Creamery.	Grass, sowed corn, meal and bran.	"	art milk for	None.
Frank Town, No. 6	Grass.	"	a would be	Yes; cause, warm weather; improper care of cans and milk.
Block, No. 12	Grass.	"	and unequal.	None.
Randolph Comb., No. 5	Grass, sowed corn, bran and middlings.	"	Never worked any; have heard cheese makers say that it made a very poor quality of cheese.	Have had some; cause, hot weather; improper care of cans and milk; cows heated by fast driving.
Eagle, No. 3	Grass.	"	Could not say; never had any experience	Yes; cause, sour cans and warm weather.
East Otto, No. 1	Grass.	"	ad been fed whey.	Yes; improper care of cans and milk.
Fair View	Grass, bran, meal and middlings.	"	worked any milk	Only once; cause, improper care; not stirring and cooling sufficiently.
East Leon	Grass.	"	ality of milk; poor	Very little; cause, negligence in not thoroughly cleansing the cans, and from cows drinking impure water in the pasture.

Howards Corners.....	Grass and akron feed.	"	It makes slippery curd and cheese of an inferior quality; is puffy.	Yes; cause, cows overheated when milked, and not properly dipped to give animal heat a chance to escape.
Moeter	Grass.	"	If any of my patrons should feed whey I would have considerable difficulty in making good cheese.	Yes; cause, neglect and improperly cooled milk and unclean cans.
Simwood, No. 4.....	Grass and grain.	"	Causes a floating curd and a cheese which will not keep.	Yes; cause, negligence on the part of patrons to stir and cool sufficiently.
Dayton, No. 10.....	Grass.	"	Can not tell; never worked any milk where whey.	Yes; cause, negligence in taking care of milk.
Markham's	Grass.	"	1 milk where cows had	Very little; cause, negligence in attention.
Rug Town.....	Grass and corn fodder.	"	patrons feed whey the much more difficult to work well and successfully.	Yes; cause, negligence in attending to milk.
Dewey	Grass.	"	.....	None.
Ticknor.....	Grass and oats.	"	.....	Have had; cause, cows eating certain weeds in the pasture, and also from neglect to dip the milk to allow the animal heat to pass off.
Perryburgh	Grass.	"	I don't know.	
Chaplain No. 1.....	Grass and sowed corn.	"	.....
New Albion.....	Grass.	"	The milk of cows fed on whey would be acid and would sour in a short time, and the cheese made therefrom would be porous and puffy.	the milk to allow the animal heat to escape.
Pritchard	Grass.	"	.....	Have had; cause, negligence of patrons to cleanse cans thoroughly.
Sheldon Home	Grass.	"	I can't tell what effect it would have.	Yes; cause, not dipping the milk, and the
Leon	Grass.	"	Do not know; never had any.	
Cattaraugus, No. 2.....	Grass.	"	.....
North Leon.....	Grass and corn fodder.	"	Would cause an offensive smell to arise as soon as the milk was heated.	the milk cool.
Leon Center	Grass and corn fodder.	"	It would cause a tainted milk.	Yes; cause, improper care of milk, dirty cans, hot weather.
Peace Vale.....	Grass.	"	Do not know.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

| the milk to allow animal heat to escape

McKinster Hollow	Grass.	None.	If any of my patrons should feed whey it would cause a tainted milk and hard to work.	Yes; cause, failure to stir the milk and get animal heat out.
Yorkshire Center	Grass, corn fodder.	"	Makes poor quality of milk, bad-flavored cheese.	Yes; cause, not properly stirring the milk.
Sandusky, No. 3.....	Grass, corn fodder and bran.	"	In case they did, it makes a bad flavor in the milk and wet, soggy cheese which will not keep more than three weeks and smells bad.	None.
Freedom	Grass, corn fodder.	"	Makes a very poor quality of milk, a poor-flavored and porous cheese.	
Siloam	Grass, corn fodder.	"	Never had any difference; can not say.	
Broadway	Grass, green oats.	"	.....
Studley, J. A.	Grass, corn fodder.	"	Makes a porous curd.	
Springville, No. 4.....	Grass, corn fodder.	"	Do not know; never worked any milk where the cows had been fed on whey.	
Demmons, J.	Grass, corn fodder.	"	..... whey it would cause a and the cheese would	
Otto Union, No. 1.....	Grass, corn fodder and grain.	"	..... whey I think the milk	I warm cape: sting t it.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

Lime Brook, No. 4.....	"	"	Fair.....	"	"	Good.....	"	"	"
Mansfield, No. 1.	"	"	"	"	"	"	"	"	"
Mansfield, No. 2.....	"	"	Good.....	"	"	"	"	"	"
West Valley.....	"	"	Fair.....	"	"	Poor.....	"	"	"
Beaver Meadow, No. 16.....	"	"	Poor.....	"	"	"	"	"	"
Four Mile Union.....	"	"	Good.....	"	"	"	"	"	"
Allegany Union.	"	"	Very good.	"	"	First-class.	"	"	"
Franklinville Comb., No. 6.	"	"	First-class.	"	"	"	"	"	"
Head of Five Mile Comb., No. 7.....	"	"	"	"	"	Poor.....	"	"	"
Lyndon	"	"	Good.....	"	"	First-class.	"	"	"
Franklinville, No. 2.....	"	"	"	"	"	"	"	"	"
Wilson.....	"	"	"	"	"	"	"	"	"
Sheldon's	"	"	"	"	"	"	"	"	"
Sandusky, No. 12.....	"	"	"	"	"	Good.....	"	"	"
Sommerville.....	"	"	"	"	"	"	"	"	"
Great Valley.....	"	"	"	"	"	Open ditch.	"	"	"
South Napoli	"	"	Poor.....	"	"	Good.....	"	"	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CATARAUGUS COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Sibley	Do not think there is in the milk delivered	Very good.	On dry gr'd	Good.....	.....
Narrows		Fair.....	" "	Very good.	.....
Spring Valley		Good.....	" "	" "	.....
Little Valley Center		"	High gro'd.	Good.....	.....
Meek		Fair.....	" "	" "	.....
Little Valley	Satisfied. There is but little, if any, difference in the quality of the milk brought to our factory: do not know how it could be adjusted.	"	Good.....	" "	.....
Mansfield Brooks		Poor..... Good.....	On dry gr'd	Poor..... Good.....	.....
Otto		Fair.....	"	" "	.....
Lime Brook, No. 1.....		Good.....	First-class.	" "	.....
Plato Union		Fair.....	On dry gr'd	"	.....

East Otto, No. 5.....	There is; do not know how it could be equalized.	Very poor.	"	"	.....
Vedder	Don't know.	First-class.	"	Splendid.	.....
Bellas	There is a difference; but so slight that would not advise the question being raised.	Fair.....	"	Good.....	.....
Baker Stand, No. 2	There is little, if any, difference in the milk brought to this factory.	Good.....	"	Very good.	.....
Rock Spring, No. 3	There is; but do not know how it could be equalized.	Very poor.	"	Good.....	.....
Farmersville, No. 2.....		Good.....	"	"	.....
State Line .....	.....	Very poor.	"	Poor.....	.....
Bucktooth.....	.....	Good.....	"	Good.....	.....
Clair Bros., No. 3 .....	.....	Very poor.	"	Poor.....	.....
Biceville.....	.....	Very good.	"	Fair.....	.....
Farmersville, No. 1.....	None.	Poor.....	"	Poor.....	.....
Franklinville, No. 6	The 1 the the Thin cou	First-class.	"	Excellent..	.....
Bellas, No. 6.....	very even; ce to raise ny patrons. any way it	Very poor.	"	Poor.....	.....
Handusky, No. 10.....	There is; I don't think it could be adjusted.	First-class.	Fair.....	First-class.	.....
Franklinville Comb., No. 4.	The milk at this factory runs very even; I need with	Good.....	Good.....	Good.....	.....
White School-House	ideal	Good.....	On dry gr'd	"	.....
Rock Spring, No. 1.....	ene-	Fair.....	"	"	.....
Randolph Comb., No. 1	ness-	Good.....	"	First-class.	.....
Randolph Comb., No. 2	qual-	"	"	Good.....	.....
Randolph Comb., No. 3	ality not four	"	"	"	.....
Sample Hill.....	ow it	Good.....	On high ground.	Good.....	.....
East Otto, No. 2.....	ay in	"	On high ground.	"	.....
Brooklyn, No. 4		Fair.....	On high ground.	Fair.....	.....
Yorkshire	There is; do not know how it could be adjusted.	Good.....	On high ground.	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1898 — CATTARAUGUS COUNTY — (Continued).

	MISCELLANEOUS.			Remarks.
	Location and surroundings.	Drainage.		
1	On high ground.	Good.....		.....
1	On high ground.	" .....		.....
1	On dry gr'd	Poor .....		.....
1	"	Good.....		This factory is run on the cooperative plan.
1	"	"		This factory uses a Danish Western Separator.
Brown, Wm. M., Creamery.	Good.	First-class.		.....
Frank Town, No. 6	On dry gr'd	Poor .....		.....
Block, No. 12	"	Good.....		The inspector says the cheesemaker is a staunch advocate of State Dairy Commission.
Randolph Comb., No. 5	"	First-class.		.....
Eagle, No. 3	"	Good.....		.....
East Otto, No. 1. ....	"	" .....		.....
Fair View .....	"	" .....		.....
East Leon	Fair.....	" .....		.....
Howard's Corners	On dry gr'd	" .....		.....
Mosier	Good.....	" .....		.....

"

Poor

Fair...

There is, but do not know how to equalize.

ot know how

ot know how

know how it

n the quality

reed of cows

re fed nearly

an't tell how

n't know how

Simwood, No. 4	"	"	Fair.....	.....
Dayton, No. 10	"	On high ground.....	Good.....	.....
Markham's	"	On high ground.....	" .....	.....
Rug Town	Very poor	Poor	Poor .....	.....
Dewey.....	Fair.....	On dry gr'd.....	Good.....	.....
Ticknor	"	Favorable .....	" .....	.....
Perrysburgh.....	Good.....	Good.....	" .....	.....
Chaplain, No. 1.....	" .....	" .....	" .....	.....
New Albion	"	Favorable .....	" .....	.....
Pritchard	Fair.....	On dry gr'd.....	Fair.....	.....
Sheldon Home.....	Good.....	Fair.....	" .....	.....
Leon	"	On dry gr'd.....	Good.....	.....
Cattaraugus, No. 2	"	"	Fair.....	.....
North Leon	"	Good.....	Good.....	.....
Leon Center .....	" .....	" .....	" .....	.....
Peace Vale.....	Poor	On dry gr'd.....	Poor .....	.....
Rock Springs, No. 4	Fair.....	Fair.....	Fair.....	.....
Holden Rock Spring, No. 5.....	"	"	Good.....	.....
Cadiz Union	Excellent..	On high ground.....	" .....	.....

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 — CATTARAUGUS COUNTY — (Continued).

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CAYUGA COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Locke Butter & Cheese Company.	Locke.	Aug. 28	Cheese.	5	24	300	4,700	150	23,000	26½	24
Company ..	Locke.	28	Butter ..	6	21	220	3,800	40	6,000	75	..
..	Summer Hill.	29	Butter and cheese.	5	72	250	3,000	..	..	..	..
..	Moravia.	29	Cheese.	6	18	180	2,800	..	..	..	..
..	Ira.	29	"	6	50	300	6,000	..	..	..	..
..	Ira.	30	"	6	23	150	3,000	..	..	..	..
..	Rempronue.	30	"	5	40	360	..	250	37,500	..	21
..	North Sterling.	31	Butter.	6½	67	450	6,000	..	..	..	..
..	Ira.	Oct. 10	Cheese.	7	41	350	6,500	..	..	..	..
..	Ira.	11	"	6	23	200	2,400	..	..	..	..
..	Sterling.	15	"	7	68	450	6,000	..	..	..	..

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CAYUGA COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Locke Butter and Cheese Company.	Full cream	50	10	105,000	9½	9	.....	Native Jerseys and Durham.
Owasco Valley Cream Company.	.....	.....	.....	.....	.....	.....	.....	Native Jerseys and Holstein.
Summer Hill.....	Skim.....	48	6	45,200	10	7½	Yes...	Natives.
Moravia Association.....	Full cream	45	6	40,500	10½	8 7-10	.....	Natives.
Ira.....	Full cream	55	11	100,000	10	10	Yes...	Natives.
Bethel Corners	Full cream	55	5	40,000	10	10	.....	Natives.
Sayles Corners .....	.....	.....	.....	.....	.....	.....	Yes...	Natives.
North Victoria Cheese Company.	Full cream	62	10	100,000	10	10	.....	Natives.
Ira.....	Full cream	57	9	100,000	10	8½	.....	All kinds.
Bethel Corners	Full cream	60	4	35,000	10	8½	.....	All kinds.
North Victory.....	Full cream	61	9	100,000	10	8½	.....	All kinds.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CAYUGA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Locke Butter and Cheese Company.	Grass.	None.	.....	Have had; cause, impure water.
Owasco Valley Cream Company.	Grass.	"	.....	None.
Summer Hill	Grass.	"	.....	None.
Moravia Association	Grass.	"	.....	None.
Ira	Grass.	"	.....	Cause, milk not properly cared for in the stables.
Bethel Corners	Grass.	"	.....	Not properly airing it and kept in stable too long after milking.
Sayles Corners	Grass.	"	.....	.....
North Victoria Cheese Company.	Grass.	"	.....	Have had; cause, not properly cured.
Ira	Grass.	"	.....	.....
Bethel Corners	Grass.	"	.....	Don't know.
North Victory	Sowed corn.	"	.....	Have had; cause, don't get animal odor out of milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CAYUGA COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Locke Butter and Cheese Company.	None.....	Good.....	Good.....	Good.....	.....
Owasco Valley Cream Company.	.....	" .....	" .....	" .....	.....
Summer Hill.....	.....	" .....	Sum'er Hill	.....	.....
Moravia Association.....	Not any for cheese	"	Moravia ..	Good.....	.....
Ira.....	There is a difference	"	Good.....	Op'n drain.	.....
Bethel Corners	There is a difference .....	" .....	.....	Op'n ditch.	.....
Sayles Corners	There is a difference	Poor	Sayles Corners.	Poor	This factory is run on the Fairland system; the cream is gathered by wagon.
North Victoria Cheese Company.	There is a difference	Good.....	Good.....	Op'n drain.	.....
Ira.....	.....	" .....	Sand, gr'nd	Good.....	.....
Bethel Corners .....	.....	Fair.....	Level gr'nd	Poor .....	.....
North Victory.....	.....	Good.....	.....	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	Towns.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Arkwright Centre	Arkwright.....	Oct. 17	Cheese	6	20	350	4,500	.....	.....	.....	.....
Arkwright Valley	Arkwright.....	17	"	6	20	250	4,500	.....	.....	.....	.....
Laona	Pomfret	17	"	6	25	300	7,000	.....	.....	.....	.....
Cordova	Pomfret.....	18	"	6	19	200	3,000	.....	.....	.....	.....
White Clover, No. 1.....	Hanover.....	18	"	6	60	550	5,500	.....	.....	.....	.....
White Clover, No. 2.....	Sheriden.....	18	"	6	57	350	4,500	.....	.....	.....	.....
White Clover, No. 3.....	Arkwright.....	19	"	6	25	250	3,000	.....	.....	.....	.....
White Clover, No. 4.....	Hanover.....	19	"	6	22	300	4,000	.....	.....	.....	.....
White Clover, No. 8.....	Villanova.....	19	"	6	13	150	1,500	.....	.....	.....	.....
Nashville.....	Hanover.....	19	"	6	40	300	4,000	.....	.....	.....	.....
Marshfield Comb., No. 20.....	Hanover.....	19	"	6	35	300	2,000	.....	.....	.....	.....
Hanover Center.....	Hanover.....	19	"	6	30	175	1,800	.....	.....	.....	.....

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Sheldon's Corners, No. 24.	Colored; full cream ..	59	5	100,000	10	9	Yes...	Devonshire. lock. stock.
..	
..	White; full cream ..	42	7	70,000	10	8½	Yes...	
..	
..	Colored; full cream ..	6	32	65,000	8½	9	Yes...	
..	
..	Colored; full cream ..	60	5½	50,000	10	8½	No...	
..	Colored; full cream ..	60	4	..	10	9	Yes...	
..	White; full cream ..	60	5	..	10	9	..	
..	White; full cream ..	40	3	25,000	9½	8½	Yes...	
..	White; full cream ..	55	5	41,000	10	8½	No...	olstedn.
..	White; full cream ..	37	5	..	10	9	Yes...	
..	
..	Colored; full cream ..	60	3	65,000	10½	8½	No...	
..	Colored; full cream ..	60	7	63,000	10½	8½	Yes...	
..	Full cream ..	60	7	65,000	9½	8½	..	
..	Full cream ..	40	8	60,000	9½	8½	..	
..	Full cream ..	60	6	60,000	10	8½	..	
..	Full cream ..	60	6	70,000	10½	8½	..	
..	Full cream ..	62	10	125,000	10	8½	..	
..	Full cream ..	63	18	220,000	10	8½	..	olstedn.
..	Full cream ..	65	5	60,000	10	9	..	
..	
..	Full cream ..	45	11	6,400	9½	8½	Yes...	
..	
..	
..	Full cream ..	59	8	..	9½	8½	No...	
..	
..	Full cream ..	..	..	..	..	..	..
..	Full cream ..	65	4	60,000	10	8½	Yes...	

Glymer Prize Creamery
Case...
Findley's Lake
Torrey

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHAUTAQUA COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Do you favor State average price received for cheese.	Do you favor State	
Alden.....	Full cream	55	8	90,000	8%	Yes...	Natives and grades.
Pleasantville	Full cream	58	12	125,000	8%	"	All kind.
Waterman	Full cream	40	15	120,000	8%	"	Native and grades.
DeWittville	Full cream	60	5	65,000	8%	No	Natives and grades.
Bear Creek Creamery	Full cream	59	6	40,000	8%	Yes	All kinds.
Lewis	Full cream	61	6	55,000	8%	Yes	Most every variety.
Cooper & Derby's Creamery	Full cream	45	7	35,000	8%	Yes	Native and grades.
.....	Full cream	60	6	80,000	8%	"	Grades and natives.
.....	Full cream	60	7	40,000	9	"	Native and grades.
.....	Full cream	60	7	70,000	9	"	Native and grades.
.....	Full cream	60	5	45,000	8%	"	Native and grades.
.....	Full cream	60	9	105,000	8%	Yes	na.
.....	Full cream	58	13	125,000	8%	"	
.....	Full cream	59	4	40,000	9	No	Common and Durhams, Graded, Durhams.
Carroll Cold Spring Creamery	Full cream	40	4	35,000	8%	"	Graded, Durhams.
Fenton Creamery	Full cream	60	9	70,000	8%	Yes	Graded, Durhams.
Southern Chautauque	Full cream	60	6	55,000	8%	"	Graded, Durhams.
Palmer Spring Creamery	Full cream	60	6	70,000	8%	"	Graded, Durhams.
Watt's Flats	Full cream	60	6	70,000	8%	"	Graded, Durhams.
Boomerstown	Full cream	60	6	70,000	8%	"	Graded, Durhams.
Clover Creamery	Full cream	60	6	70,000	8%	"	Graded, Durhams.
Kiantone Val. Creamery	Full cream	60	6	70,000	8%	"	Graded, Durhams.

[illegible]

Location	Feed	None.	If sour whey fed to cows would make poor quality of milk; does not think that fresh or sweet whey would have any bad effect. It would make tainted milk. slippery curd and porous cheese.	Have had some; cause, from cows drinking stagnant or impure water.
Goeben	Grass, sowed corn bran and middlings.	"	If whey was for cheese therefrom would not! Don't think all; never where cows.	Yes; cause, not aerating the milk suffi-
Town Line	Sowed corn, bran and meal.	"	Have never had any experience with milk where cows were fed whey.	
Olymer Prize Creamery	Grass, sowed corn, fodder and bran.	"	It would weaken it and would take more milk to make the cheese, and would give it an unpleasant odor.	The after chine in the
Case	Grass.	"	Affects the flavor of the milk and would also be injurious to the cheese.	Yes; cause, the cows eating weeds or by not properly cooling the milk.
Findley's Lake	Grass, sowed corn and bran.	"	Gives it a bad texture, porous and puffy, and requires more milk to make a pound of cheese.	Have had; cause, by warm weather or by the cows drinking out of stagnant pools of water.
Torrey	Bran, sowed corn, millet.	"	It would take more pounds of milk to make a pound of cheese, and make it dry and crumbly, and give it a bad odor.	Have had; cause, neglect of cows and not properly aerating the milk after milking.
Rood	Corn, bran and corn fodder.	"	It would change the texture of the milk, also the cheese, and gives it an unpleasant smell.	Have had; cause, neglecting the cows and not properly aerating the milk.
Charlotte Centre	Bran, meal and corn fodder.	"	It weakens the quality of the milk.	Have had, cause, not aerating the milk properly after making, and neglect of the
Charlotte Union	Bran, meal and corn fodder.	"	It would hurt the texture of the milk and would take more milk to make a pound of cheese.	ar and im- and want
Canadawa	Bran, meal and corn fodder.	"	Could not tell; never worked any milk where cows had been fed whey.	from stag- it properly
Artwright Union	Sowed corn, bran and middlings.	"	No bad of a when to the quality and quantity.	cows drinking care of cans
Sinclairville	Sowed corn, bran, meal and middlings.	"	* Some feed skim milk.	and improper are water and
Chautauque Lake Cream'y	Grass, sowed corn, bran, meal and middlings.	"		cattle eating weeds.
Somerdale				
Sherman Creamery				

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Deerspring Creamery	Grass, bran, meal, mixed, sowed corn and fodder.	"	This butter made from this milk is not so firm, but the flow of milk is increased.	Very little: cause, not taking care of the
Mayville	Grass, bran, meal and sowed corn fodder.	None.	.....	thoroughly.
Willowdale Creamery	Grass and sowed corn and bran.	"	Would make the milk of very poor quality, and the milk would sour quicker; it would take more milk for a pound of cheese.	Some: cause, not kept clean; the greatest cause, cows made to run and get heated as they
Rundell's Creamery	Grass, sowed corn, bran and feed.	"	Don't know; never had any experience with such milk.	and cooled the animal
Red Bird	Grass and grain	"	It would hurt the texture of the cheese and would weaken the milk.	; taken of the milk
Alden	Grass, corn fodder..	"	It .. c Do	'cows and g the milk
Pleasantville	Grass, corn fodder, and grain.	Yes...	to make a pound ie texture of the milk injuriously.	ooling or we eating
Waterman	Grass, bran and meal.	"	Do not think it affects the milk injuriously.	Had some; caused by not properly cooling the milk after milking, or by the cows drinking stagnant water.
DeWittville	Bran, meal and middlings.	Some do.	Do not think it affects the milk unfavorably.	Have had some; cause, neglecting the cows and not properly aerating or cooling the milk.
Bear Creek Creamery	Grass and grain .....	.....	.....	Have had some; cause, not properly aerating or cooling the milk after milking.

* But they feed skim milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHAUTAQUA COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Boomertown.....	Sowed corn, bran and meal.	None.	It would make poor quality porous and tainted cheese.	Have had some; cause, hot weather; cows drinking impure water; improper care of cans and milk.
Clover Creamery	Sowed corn, bran and middlings.	"	Do not know how it would affect milk.	Have had some; cause, cows feeding on weeds and foul stuff; drinking impure and stagnant water.
Klantone Valley Creamery.	Sowed corn, carrots, oats and corn.	"	It makes a poor quality of milk, but think it makes more difference in making cheese than butter.	None.
Stillwater Creamery	Sowed corn, meal, bran and middl'gs	"	Would make poor quality of milk and have tendency to make poor-flavored butter.	None.
Clear Creek.....	Sowed corn, millet, bran and middl'gs	"	Do not know what affect the feeding of whey to cows would have on the milk.	Have had some; cause, probably improper care of milk or cans or both.
The Ellington, No. 2	Sowed corn, meal and bran.	"	Makes slippery curd; very poor quality of cheese.	Have had some; cause, improper care of milk cans; not aerating or cooling sufficiently.
The Ellington, No. 1	Sowed corn, meal and bran.	"	Makes a slippery curd; porous cheese; poor quality.	Have had some; cause, improper care of cans; not aerating or cooling sufficiently.
The Lavant Creamery.....	All kinds.	"	Does not affect the milk for making butter.	None.
Gerry Creamery.....	All kinds.	"	Has never had any experience with such milk.	Yes; cause, the cows eat weeds commonly called leeks.
Tompkins Creamery.....	All kinds.	"	Don't know; never had any experience with any milk of this sort.	Have had some; cause, improper care in not cooling and aerating by stirring; also by milk being set where there is a stench and unhealthy cows.
Chautauqua Bluff Creamery	Grass, sowed corn, feed and bran.	"	Have never used milk when the cows producing it were fed on whey; don't know what effect it would have on the milk.	Very little; cause of it was the cows eating leek weeds that grow in the pasture.
Star Creamery	Grass, sowed corn and bran.	"	Don't know how it would affect it.	Have had some; cause, poor care; milk was not aerated and cooled by dipping; also, cows drinking very stagnant, muddy water in the pasture.

Maple Grove.....	Grass and sowed corn.	"	.....	Canas has time now to fast driving, or at water, or a ure or near place he milk.
Tomkins.....	Grass, sowed corn and bran.	"	I can't tell; I have never had any experience with such milk.	he milk. driven a great milked regularly, not dipping the
Climax Creamery.....	Grass, sowed corn and meal.	"	Don't know; have never used any such milk.	are of milk; not as to aerate and , evenings; also keeping it covered to closely.
Warner.....	Grass and sowed corn, meal and shorts.	"	It would be dilute, acidulous and would sour quicker, and the cheese made from such milk would not be substantial; it would be spongy and soft and would not keep very long.	Yes; cause, cows eating leaks in the pasture; cows drinking slimy or dead water; or a carriage over night, tightly during warm, eating weeds, or the m swamp land.
White Clover, No. 5.....	Grass, corn fodder.	"	Injurious, and would cause the cheese to have a bad odor.	use, not properly cooling or aerating the milk, or by improper care taken of the cans.
Maple Hill Creamery.....	Grass, grain.	"	.....	Yes; cause, neglect of the cows, or not properly aerating the milk after milking.
Wright's Corners.....	Grass and grain.	"	Injurious.	Yes; cause, hot weather, and not properly aerating and cooling the milk.
Beardsley.....	Grass and grain.	"	Injurious.	Yes; cause, not properly taking care of the cows, or neglecting to keep the cans clean.
Linwood, No. 1.....	Grass, corn and grain.	"	Very injurious, and gives a bad odor to the cheese.	Have had some; cause, neglect of cows, or improper care taken of the cans.
Linwood, No. 2.....	Grass, corn fodder and grain.	"	Injurious, and gives a bad odor to the cheese.	Have had some; cause, improper care of cows, and neglecting the cans.
Linwood, No. 3.....	Grass, corn fodder and grain.	"	Weakens the milk; would take more milk to make a pound of cheese and would give it a poor quality of cheese; poor quality of cheese; bad flavor.	Have had some; cause, hot weather; poor water; improper care of cans; not cooling milk sufficiently.
Kent Street.....	Grass, sowed corn and bran.	"	It weakens it.	..... by taking aerating
Arkwright Centre.....	Grass, corn fodder and bran.	"	.....	.....
Arkwright Valley.....	Grass.	"	The milk dilute make fed or Think i vored cheese.	..... of cows; I think, by water
Laona.....	Grass and bran.	"	.....	..... care of cooling
Cordova.....	Grass, meal and grain.	"	It would weaken the strength of the milk, and take more milk to make a pound of cheese.	..... rly cool-

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
White Clover, No. 1	Grass, bran, grain.	None.	The milk fed on whey would be of poor quality, and the cheese made from such milk would be heavy and puffy, and would sour after a short time.	Have had some; cause, improper care of milk; it was in poor condition.
White Clover, No. 2	Grass, sowed corn, bran and meal.	"	It would make a poor quality of milk; make a slippery curd; poor flavor to the cheese.	Have had some; cause, hot weather; improper care of cans and milk.
White Clover, No. 3	Grass.	"	It would give the milk a poor odor; makes puffy cheese; poor quality.	
White Clover, No. 4	Grass, grain, corn fodder.	"	It would cause milk to be of inferior quality, and the cheese made therefrom would be heavy and puffy and porous.	
White Clover, No. 8	Grass, corn, bran and meal.	"	Makes a poor quality, bad odor, puffy and porous cheese.	
Nashville	Grass, meal and br'n	"	It injures the curd and spoils the cheese flavor; bad odor in the milk; smells bad and cracks.	
Marshfield Comb., No. 20	Grass, fodder, bran and grain.	"	Milk of cows fed on whey would produce cheese that would be acid or would sour while curing; cheese would also be puffy.	
Hanover Center	Grass, br'n and meal.	"	Makes a slippery curd; poor-flavored and porous cheese.	proper care, poor water, etc.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NEW YORK STATE DAIRY COMMISSIONER.

71

NAME OF FACTORY.		Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Sheldon's Corners, No. 24.	With regard to difference in quality of milk, if any, and how this difference can be equalized or adjusted.	Good.....	Dry ground	Good.....	Whey is all taken by the patrons
Equity Creamery.....	There is some difference in the quality and value of the milk of different patrons; but it is not enough to pay to try to equalize it so long as our patrons are satisfied.	"	Good.....	"	factory run the pro- with the n on the
Panama Creamery.....	cream gathered the only way of we pursue, viz.: quantity of each Curtis' oil test the quantity ac- creamery runs very even; not enough difference to raise any question among our patrons.	"	High, dry ground.	First-class.	Is run on the coöperative plan; and uses the Danish separator system
Wall Street.....	There is a difference; if any, it is very grade and	"	On dry gr'd	Good.....	.....
Open Meadow Creamery ..	the milk and there is ut as our is are, we raise any	"	" "	First-class.	Danish Western separator system used at this creamery.
French Creek.....	is quality from dif- impracti- is not so as butter	"	" "	Good.....	.....
Marks' Creamery.....	qualities. There is a difference; but do not think it best to equalize it; think that in a few years there will be a way to equalize it.	"	On high ground.	First-class.	This creamery is run on the coöperative plan.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any; and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Morgan's Corners.....	Think there is very little difference in the quality and value of the milk received from the different patrons; if we commenced some method of equalizing or adjusting the milk of the different patrons, we should lose half our patrons. There is a difference, but very slight.	Fair.....	On high ground.	First-class.	.....
South Sherman.....	There is no difference in the quality of milk brought to this factory; as the cows are all, or nearly so, of the same stock.	Good.....	On high ground.	Good.....	.....
Hubbard's Corners.....	Our milk runs very even; so much that I would not raise any question with the patrons about it.	".....	On high ground.	".....	.....
Cook's.....	The milk delivered at this factory runs very even; not enough difference to raise any question among our patrons.	".....	On high ground.	First-class.	.....
Goshen.....	No perceptible difference in the quality of milk received at this factory.	".....	On high ground.	Good.....	.....
Town Line.....	Our milk runs very even; would not think it advisable to raise questions as to the quality of the milk with our patrons.	First-class.	On high ground.	First-class.	.....
Clymer Prize Creamery....	The milk runs very even; it is advisable to raise the quality of the milk.	".....	Good.....	Poor.....	.....
Case.....	There is a difference in the quality of the milk; there is enough to make a difference in the price received at this factory.	Good.....	On high ground.	First-class.	.....
Findley's Lake.....	No material difference in the quality of the milk; the difference is too slight to deem equalization necessary; milk runs very even.	".....	On high ground.	".....	.....
Torrey.....		".....	Good.....	Good.....	Conference held by the instructors was approved and will be adopted in part.
Rood.....		".....	".....	".....	The cheese-maker at this factory attended the conference and was much pleased.

Charlotte Center	No material difference; equalization not deemed necessary.	"	"	"	The cheese-maker at this factory attended the conference and will adopt several of the methods used by instructor.
Charlotte Union	No difference in	Very good.	"	Very good.	.....
Canadawa	factory; it run	Good	"	Good.	.....
Artwright Union	No difference in	Very good.	Excellent..	" .....	.....
.....	at this factory, the				ended the he would the meth-
.....	factory, by the test of the cheese-maker, runs about even.				.....
.....	The milk runs very even by the cheese-maker's tests; equalization not necessary.	Good	Good .....	" .....	.....
.....	The difference is very slight. If any; have frequently tested the milk brought to creamery.	"	High gro'd.	" .....	.....
.....	Tested the milk and find the quality so near alike, that I do not think it advisable to raise any questions with our patrons.	Poor	On marshy ground.	Very poor.	.....
.....	There is a difference in the milk, but it is much better; do not think value of product is different.	Good	First-class.	Good .....	.....
.....	Don't think value of product is different.	"	Good .....	" .....	.....
.....	ferent patrons, and find it runs very even.	Good	Good	Good .....	.....
.....	Thinks there is some difference; don't	Fair	Good .....	" .....	.....
.....	but is not we did we	Good	Dry gr'd..	Fair .....	.....
.....	patrons, milk; runs	"	"	Good .....	.....
.....	necessary, he milk re-	" .....	" .....	" .....	.....
.....	ry uniform;	" .....	" .....	" .....	.....
.....	milk to re-	" .....	" .....	" .....	.....
.....	There is a difference, but do not know how to adjust it.	"	Good .....	" .....	.....
.....					At this factory they approved the method of making cheeses used by instructors, and will adopt

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
DeWittville	No difference in the value of the milk received at this factory; equalization not necessary.	Good.....	Good.....	Good.....	This factory uses but one curd knife.
Bear Creek Creamery	There is a difference in the value of the pure milk received at this factory; favor equalization, but have never tried it.	Very good.	"	"	"
Lewis	The milk runs very even at this factory; equalization not necessary.	"	"	"	"
Cooper & Derby's Cream'y.	Under the test made by the butter maker he finds that the milk is so uniform that equalization is not necessary.	Good.....	"	"	"
Stockton	No difference in the value of the milk; equalization not necessary.	"	"	"	This factory uses a horizontal and perpendicular knife to cut the curd and makes cheese after the old method.
South Pomfret Creamery	Milk runs very even; equalization not necessary.	"	"	"	"
Casadaga Creamery	There is a difference in the value of milk; would favor equalization, but would not know how to get at it.	"	"	"	"
Moons Station	There is no difference in the milk as it all runs very uniform.	"	"	"	This factory uses a curd mill; the cheese-maker attended the con-
.....	No difference in the value of milk; equalization not necessary.	"	"	"	A
The Ellington, No. 4. ....	.....	" .....	On dry gr'd	"	"
The Dry Brook, No. 3. ....	.....	" .....	" .....	" .....	" .....
The Ferrier	No not necessary.	" .....	.....	" .....	" .....

Elery Creamery	No difference; equalization not necessary.	"	"	"	"	The cheese-maker attended the conference and was much pleased with the work of the instructors..
Bemis Point	No material difference in the milk; equalization not necessary.	"	"	"	"	
West Ellery	No difference in the value of milk; equalization not necessary.	"	"	"	"	
Cold Water Creamery	are not	"	"	"	"	
Bellance	lat	"	"	"	"	
Riverside Creamery	ink the	"	"	"	"	
Carroll Cold Spring Creamery	There is no difference in the quality of good milk to amount to anything; cows nearly of the same grade and fed very much alike.	"	"	"	"	
Penton Creamery	Have not tested the milk but once or twice this season; did not find any difference of any amount then.	"	"	"	"	
Southern Chautauqua	The milk delivered at this factory runs very even.	"	"	"	"	
Palmer Spring Creamery	None.	"	"	"	"	
Watt's Flats	Yes, there is a difference, but do know how it could be adjusted.	"	"	"	"	
Boonertown	Runs very even; would not think it advisable to raise any question as to quality of the milk with our patrons.	"	"	"	"	
Clover Creamery	There is, but not enough to cause any question to be raised among our patrons.	"	"	"	"	
Kiantone Valley Creamery	There is, but not enough to cause any question to be raised among our patrons.	"	"	"	"	
Stillwater Creamery	Our milk runs very even, would not think it is advisable to raise any question as to the quality.	"	"	"	"	This factory is run on the coöperative plan.
Clear Creek	en; not enough question among	"	"	"	"	
The Ellington, No. 2	t don't know how	"	"	"	"	
The Ellington, No. 1	s factory.	"	"	"	"	
The Lavant Creamery		"	"	"	"	
Gerry Creamery		"	"	"	"	
Tompkin's Creamery		"	"	"	"	
Chautauqua Bluff Creamery		"	"	"	"	
Star Creamery		"	"	"	"	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHAUTAQUA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Maple Grove.....	Tested the milk of all my patrons. I find some difference in the lactometer standing, but don't think there is any in the cheese qualities of the milk.	Poor	On dry gr'd	Good.....	.....
Tomkins	Think there is a difference in the value of the milk of different cows, but the quality of the milk of each dairy is almost exactly the same; don't know how to equalize it.	Good.....	Fair.....	"	This factory is private; makes the cheese for his own use and neighbors.
Climax Creamery	We test the quality of milk delivered here and find there is a difference in its value, but we don't think it advisable to raise the question in regard to the different qualities.	"	On high grounds.	"	.....
Warner.....	Have tested the milk of all my patrons at short intervals, find some difference in the standings; don't think it could be equalized or adjusted for cheese purposes; might equalize it by means of testing with lactoscope for butter purposes.	"	On high grounds.	First-class.	The cheese-maker of this factory attended the conference in Sinclairville; he thought the method of our instructor, excellent, and adopted that method with slight modifications.
White Clover, No. 5.....	There is no difference in the value of the pure milk received at this factory; equalization not necessary.	"	On high ground.	Excellent..	.....
Maple Hill Creamery	The milk is all the same value at this factory; equalization not necessary.	"	On high ground.	Good.....	.....
Wright's Corners.....	Milk at this factory is all about the same quality; equalization not necessary.	"	Good.....	"	.....
Beardsley.....	No material difference in the value of the milk received at this factory; equalization not necessary.	" .....	"	"	.....
Linwood, No. 1.....	The milk at this factory is tested and found to run very even; equalization not necessary.	" .....	"	"	.....

Linwood, No. 3	No material difference in the quality of the milk, runs very even; equalization not necessary.	"	"	"
Linwood, No. 3	Equalization not necessary, as the milk runs very even.	"	"	"
Kent Street	The milk received at this factory runs so even that it would not be advisable to raise the question among our patrons.	"	On high ground.	"
Arkwright Centre	The value of the milk is all the same; equalization not necessary.	"	Good	"
Arkwright Valley	I have tested the milk received from the several patrons and find that it runs very evenly; don't think it requires equalization.	"	"	First-class.
Leona	We have at our factory milk brought at a little if any more than enough to raise the question among our patrons.	"	On high ground.	"
Cardova	The value of the milk is all the same; equalization not necessary.	"	Good	Excellent.
White Clover, No. 1	I have tested the milk of my patrons and found it to be almost of same quality; I don't think it best to raise the question as to quality of milk among my patrons.	"	"	"
White Clover, No. 2	There is but little difference in the quality of the pure milk brought to our factory; not enough to raise any question among the patrons.	"	On high ground.	First-class.
White Clover, No. 3 .....	.....	" .....	On high ground.	"

at the meeting in Sinclairville, and saw the process of making by our instructor, was much pleased with it and will adopt the same.

At this factory they use one perpendicular curd knife, cheese-maker was present at the con-

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHAUTAQUA COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
White Clover, No. 4.....	.....	Good.....	On dry gr'd	First-class.	At this factory the cheese-maker was present at the cheese conference held at Forestville, and liked the method by our instructor and has adopted his method with some modification. Same as above.
White Clover, No. 3.....	Our milk runs so even that we think it would not be policy to raise any question as regard to quality.	"	On dry gr'd	"	.....
Nashville.....	The milk runs very even, no cause now to find fault; no equalization is necessary; would not raise the question with the patrons.	Very good.	First rate..	Good.....	.....
Marshfield Comb., No. 2a....	Have tested the milk of each patron by the lactometer and cream gauges; find some variations, but do not know how to equalize it.	" "	On high ground.	Very good.	.....
Hanover Center	No perceptible difference in the quality of milk brought to our factory.	Good.....	On high ground.	Good.....	At this factory the proprietor and are at the conference at Forestville; the process and with.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHEMUNG COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.
Hoffman Creamery	Horseheads	July 26	Butter and cheese	8	36	400	4,000	300	60,000	26	26
	Veteran	26	Butter	8	50	420	8,000	360	70,000	26	26
	Horseheads	26	Butter and cheese	8	8	175	8,400	90	2,000	13	26
	Elmira	27	Butter	12	15	500	3,000	60	21,900	24	26
	Elmira	28	"	12	21	275	4,000	135	45,435	24	26
	Veteran	28	"	8	46	425	9,248	330	72,000	24	26
	Big Flats	30	Butter and cheese	8	60	460	7,000	300	80,000	24½	26
	Big Flats	August 1	"	8	19	360	4,000	300	60,000	24	26
	Big Flats	2	"	8	13	180	1,600	100	24,000	26	26
	Veteran	3	"	8	47	430	9,000	300	60,000	26	26
	Horseheads	4	"	8	11	125	2,000	80	16,000	26	26
	Erin	6	Butter	7	29	250	4,000	180	60,000	12½	26
	Baldwin	7	"	8	38	425	6,000	250	6,000	24	26
	Chemung	8	Butter and cheese	8	34	500	8,000	300	60,000	26	26
	Ashland	9	"	8	...	350	6,000	350	153,000	26	26
	Chemung	10	"	8	15	255	3,900	140	28,000	26	26

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHEMUNG COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Hoffman Creamery.....	Skimmed.....	30	12	60,000	12½	3½	No	Native and Holstein.
.....	.....	.....	.....	.....	.....	.....	.....	Native and Holstein.
.....	Skimmed.....	30	4	900	12½	3½	Yes	Native and Holstein.
.....	.....	.....	.....	.....	.....	.....	.....	All kinds.
.....	.....	.....	.....	.....	.....	.....	.....	All kinds.
.....	.....	.....	.....	.....	.....	.....	.....	Native and Holstein.
.....	.....	.....	.....	.....	.....	.....	.....	Native, Holstein, Durham and Jerseys.
.....	Skimmed.....	32	14	100,000	18	3	Yes	Native, Jerseys and Durhams.
.....	Skimmed.....	35	6	60,000	16	4	No	Native and grades.
.....	Skimmed.....	30	6	36,000	14	4	Yes	.....
.....
.....	Skimmed.....	34	11	90,000	18	3	"	Native and Holstein.
.....	Skimmed.....	30	3	18,000	16	3	"	Natives.
.....	.....	.....	.....	.....	.....	.....	.....	Natives.
.....	.....	.....	.....	.....	.....	.....	.....	Natives.
.....	Skimmed.....	33	3	70	16	3	Yes	Natives.
.....	Skimmed.....	34	5	80,000	16	4	"	Natives.
.....	Skimmed.....	30	6	18,000	16	4	"	Native, Holstein, Jersey and Guernsey.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHEMUNG COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Hoffman Creamery	Pasture.	None.	None	None.
"	Pasture.	"	None	Have had some; cause, stables.
"	Pasture.	"	None	None.
"	Corn, meal and bran	"	None	None.
"	Pasture.	"	None	Has had tainted milk; cause, feeding turnips or cabbage.
"	Pasture and sowed corn.	"	None	None.
Silver Spring Creamery	Pasture and grain.	"	None	None.
"	Pasture.	"	None	None.
"	Pasture.	"	None	Has had tainted milk; cause, not known.
"	Pasture and fodder	"	None	None.
"	corn.	"	None	None.
"	Pasture.	"	None	None.
"	Pasture.	"	None	None.
"	Pasture.	"	None	None.
"	Pasture and corn	"	None	None.
"	fodder.	"	None	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHENANGO COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Hoffman Creamery	There is a vast difference in the quality of milk.	Good and clean.	Very low and flat place; odor bad.	Clos'd ditch	.....
Excelsior Creamery	There is a difference; do not know how to equalize it.	Good	High gro'd.	Has drainage.	.....
Breesetown Creamery	There is a difference; how to equalize it, can not say.	"	Good	Has drainage.	.....
Stone, L., Creamery .....	.....	" .....	" .....	Good .....	.....
Tubb's Creamery .....	.....	" .....	" .....	" .....	.....
Veteran	There is a difference; can not say.	"	On a high place.	By a log pipe.	.....
Silver Spring Creamery	There is a difference; no way to equalize it.	"	Good	Open drain	.....
Hammond Creamery	There is a difference; do not know how to equalize it.	Very good; fine water.	"	By means of creek.	.....
Grove Spring Creamery Company.	There is a difference; do not know how to equalize it.	Excellent.	"	Drainage perfect; built on a stream of water.	.....
Pine Valley Creamery	There is a difference; no way to equalize it.	.....	.....	By means of a large creek.	.....
Cold Spring Creamery	There is no difference; no way to equalize it.	Good	Good	Open drain.	.....
Laurel Hill Creamery	There is a difference; know not how to adjust it.	"	"	By means of sewer pipe.	.....

North Chemung Creamery.	There is a difference; can not be equalized.	"	.....	"	.....	Box drain.	.....
Lowman's Creamery.....	There is a difference; do not know how it can be equalized.	"	.....	"	.....	By means of creek.	.....
Wellsburgh Creamery	There is a difference; can not be equalized.	"	.....	"	.....	By means of sewer to Chemung river.	.....
Chemung Creamery.....	There is a difference, but it can not be equalized.	"	.....	"	.....	Open drain.	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHENANGO COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Lyon Brook Creamery	Norwich	July 26	Butter and cheese	7	12	300	5,600	115	20,700	50	20
	Norwich	July 27	Cheese	7	43	550	19,700	300	50,750	50	24
	Norwich	August 1	Butter and cheese	6	34	900	17,000	...	...	...	...
	Plymouth	August 2	Butter	6	23	450	7,000	190	18,000	60	23
	Norwich	August 3	Cheese	6	28	300	7,000	180	18,000	60	20
	Plymouth	August 3	Butter	6	8	180	4,000	150	20,000	25	20
	Oxford	August 4	Butter and cheese	7 1/2	24	500	8,000	160	31,000	50	24
	Guilford	August 7	Cheese	6	38	400	7,000	140	25,000	50	25
	North Norwich	August 8	Butter and cheese	6	23	300	5,000	120	27,100	...	...
	Bmyrna	August 9	Butter and cheese	6	38	500	8,500	...	...	...	...
	Bmyrna	August 10	Cheese	6	21	200	3,800	...	...	...	...
	Bmyrna	August 10	Butter and cheese	6	8	150	2,500	60	9,000	60	22
	Sherburne	August 10	Butter and cheese	6	16	250	4,000	100	12,000	25	23
	Sherburne	August 11	"	6	21	280	8,700	155	25,000	20	23
	Preston	August 16	"	6	21	309	5,000	190	26,390	33	23
	Plymouth	August 17	Butter	6	15	267	5,000	200	31,000	25	...
	Plymouth	August 17	Butter and cheese	6	6	134	1,933	61 1/2	9,225	30	...
	Preston	August 18	Butter	6	22	350	5,346	130	23,400	40	21
	Preston	August 18	"	6	14	325	5,700	150	150,000	33	...
	Oxford	August 18	"	6	31	400	5,700	191	37,000	40	23
	Smithville	August 21	"	6 1/2	25	550	8,070	180	3,800	40	23
	Smithville	August 21	"	6	19	310	4,576	125	22,625	37	23
	Smithville	August 21	"	7	25	350	5,000	150	25,000	33	20
	Smithville Flats	August 22	"	6	17	227	4,145	60	10,800	50	...
	Smithville	August 23	"	6	31	500	6,800	150	27,000	11 1/2	19 1/2
	Smithville	August 23	"	6	46	732	1,500	300	55,000	35	24
	Coventry	August 23	"	7	37	442	8,000	150	27,000	50	22
	North Norwich	August 24	"	6	13	323	4,467	106	21,155	42 1/2	26
	Oxford	August 24	"	6	18	250	4,300	130	20,000	30	25
	New Berlin	August 25	"	6	29	357	5,400	140	26,000	36 1/2	23

Great Brook	New Berlin.....	25	"	"	6	28	476	6,600	190	34,390	50 1/2	24
Stone Creamery	Oxford.....	25	"	"	6	26	340	4,000	160	31,000	25	22
Peck, R. B.....	New Berlin.....	26	Cheese			5	107	1,400	.....	.....	.....	.....
Davis	New Berlin.....	27	Butter and cheese *			8	374	5,800	170	35,870	25	25
Amblerville	New Berlin.....	28	"	"	8	18	510	6,611	210	49,374	35	26
New Berlin.....	New Berlin.....	28	"	"	12	33	864	12,500	260	90,500	48	25
Rockdale.....	New Berlin.....	2	"	"	7 1/2	25	405	6,000	150	33,700	33 1/2	23
Cold Spring.....	Gulfford	5	"	"	6	18	325	5,500	100	180,000	50	28 1/2
Sumit.....	Gulfford	6	"	"	6	13	225	3,000	75	12,000	35	22
Beaver Meadow Creamery	Otselic.....	13	"	"	6	31	300	4,000	120	21,600	31	23
Otselic.....	Otselic.....	13	"	"	6	43	475	7,000	185	20,000	35	23

* Shipped milk and cream to city.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHICAGO COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
	Half skim	39	11	79,200	12	6%	Durhams.
	Half skim	42	26	16,000	7	7	Durhams and Holsteins.
	Full cream	44	40	220,000	9 41-100	11%	Durham, Ayrshire, Alderneys and Jersey.
	Night skim	40	12	72,000	12	7%	Durhams.
	Half skim	38	11	86,000	12	7	Native.
	Full cream	36	4	25,000	10	10	Holstein and native.
	Night skim	42	16	137,000	12	7	Native.
	Night skim	50	13	126,000	11	8	Native, Holstein, Jersey and Durham.
	Full cream	36	14	66,394	10	9	Native.
	Night skim	42	11	117,494	12	6%	Native.
	Full cream	40	7	68,000	10%	9%	Native.
	Night skim	60	3	36,000	12	7	Ayrshire, Holstein and native.
	Night skim	45	8	77,000	14	7%	Native.
	Night skim	60	7	80,000	10	7	Native.
	Night skim	40	9	56,620	16	7	Native, crossed with imported cows.
	Night skim	36	4	1,200	14	.....	Native, Holst'n, Durham, Devons and Jersey's.
	Part skimmed	45	10	81,783	11%	6%	Native, crossed with imported stock.
	Skimmed	54	8	65,232	11	7	Native, crossed with Durhams and Jerseys.
	Night skim	45	11	96,600	13	7	Native, cr's'd with Holst's, D'rma and D'rma.
	Night skim	60	12	144,000	14	7	Native.
	Part skimmed	40	9	185,160	12%	9	Native, crossed with imported breeds.
	Skim	50	7	75,000	13	7	Native, crossed with Durhams and Jerseys.
	Night skim	40	9	65,160	12	8	Native.
	Night skim	60	9	29,600	12	7	Native.
	Skimmed	60	14	126,600	13	8	Native.
	Night skim	58	10	104,000	12%	7	Native.
	Half skim	45	10	90,500	12	7	Native crossed Devons, Durh'ms and Jerseys.
	Skim	48	7	66,000	12%	7	Native.
	Night skimmed	42%	10	96,000	12%	6%	Native, crossed with all kinds.

MAJESTIC COMPANY.

Great Brook	Night skimmed	50	9	81,450	14½	6½	No ...	Native, crossed with imported breed.
Stone Creamery	Skimmed	50	10	97,500	10	7	Yes ...	Native.
Peck, R. B.	Full cream	45	4	26,100	8	11	Yes ...	Native, crossed by imported breed.
Davis	Night skimmed	55	10	116,050	12	7	Yes ...	Native, crossed with all kinds.
Amblerville	Skimmed	58	8½	95,162	11½	8	No ...	Native, crossed with all kinds.
New Berlin	Skimmed	60	15	193,500	14	7	Yes ...	Native, crossed with all kinds.
Rockdale	Skimmed	44	12	119,000	12½	6½	Yes ...	Native.
Cold Spring	Night skimmed	48	9	89,700	12	6½	No ...	Native.
Summit	Skim	35	6	37,800	13½	6	Yes ...	Native.
Beaver Meadow Cream'y.	Skim	55	7	70,000	14	5	Yes ...	Native.
Otsello	Skim	45	15	103,000	14½	5½	No ...	Native and grades.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CHENANGO COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to whey.	The effects of feeding whey, on milk.	With regard to tainted milk and the cause of the same.
Lyon Brook Creamery.....	.....	None.	.....	None.
Norwich Creamery.....	Grass.	"	.....	None.
Lyon Brook.....	Grass.	"	.....	None.
Plymouth Creamery.....	Grass.	"	.....	None.
South Plymouth.....	Grass.	"	.....	None.
Plymouth Cream Company.....	Wheat bran.	.....	.....	None.
Fountain.....	Grass.	.....	.....	None.
York.....	Grass.	None.	.....	None.
North Norwich.....	Grass.	"	.....	None.
Smyrna Hill.....	Grass.	"	.....	None.
Sherburne Four Corners.....	Grass.	Some.	The milk smells of the whey and the cheese works bad.	None.
Pleasant Brook.....	Grass.	None.	.....	None.
Wilcox Creamery.....	Grass.	"	.....	I have three times; cause, diseased bag.
Baldwin.....	Grass.	"	.....	None.
Sherburne Creamery.....	Grass.	"	.....	None.
Preston Creamery.....	Grass, with wheat bran.	"	None.	None.
Excelsior.....	Grass.	"	.....	None.
Crystal Springs.....	Grass and wheat bran.	"	.....	None.
Chenango Creamery.....	Grass and wheat bran.	"	.....	None.
Preston Centre.....	Grass, corn and bran.	"	None.	Being unclean cows; manure.
Midland Creamery.....	Grass and wheat shorts.	"	.....	Had some; cause, not found out.
Farmers' Union.....	Grass.	"	.....	Has had some; cause, feed and water.
Benedict.....	Grass.	"	.....	Has had some; cause, manure; poor water in July.
Cowles.....	Wheat middlings, grass.	"	.....	None.
Smithville Centre.....	Grass, sowed corn and bran.	"	.....	None.

Excelsior	Grass, sowed corn, millet and middings.	"	.....	Has had some; cause, poor water.
Deer Spring Creamery.....	Grass.	"	.....	None.
Coventryville Creamery.....	Grass, millet and bran.	"	.....	None.
King Settlement	Grass, sowed corn and bran.	None.	.....	Cause, water in dry weather.
Hull.....	Grass.	"	.....	None.
Maple Shade	Grass, sowed corn, wheat bran.	"	.....	None.
Great Brook.....	Grass.	"	.....	None.
Stone Creamery.....	Grass.	"	.....	None.
Peck, R. B.....	Grass.	"	.....	One mess; cause, drawing whey at night and not cleaning cans.
Davis	Grass, etc.	"	.....	None.
Amblerville.....	Grass, etc.	"	.....	Had some for two days during hot weather; cause, cows eating improper food.
New Berlin	Grass, etc.	"	.....	Have had; cause, hot weather and patrons not keeping milk cans cleaned.
Rockdale	Grass, wheat bran and sowed corn.	"	.....	None.
Cold Spring.....	Grass.	"	.....	None.
Summit.....	Grass and sowed corn.	"	.....	None.
Beaver Meadow Creamery.	Grass and sowed corn.	"	.....	Had some; cause not known.
Otselic	Grass and wheat bran.	"	.....	Had some; cause not known.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—CHENANGO COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Lyon Brook Creamery.....	.....	Clean and healthy.	In a valley.....	Through floor into ditch.	.....
Norwich creamery	There is a difference; don't know how it can be paid for according to quality.	Clean and healthy.	In a valley.....	Open ditch.....	.....
Lyon Brook.....	Each patron should have the benefit of percentage of his cream.	Clean and healthy.	In a valley.....	In drain to river.	.....
Plymouth Creamery	There is a difference; don't know how it can be paid for according to quality.	Clean.....	In village of Plymouth.	Open ditch into adjoining lot.	.....
South Plymouth.....	There is a difference; don't know how it can be paid for according to quality.	".....	Situated on the base of a hill.	Covered drain to brook.	.....
Plymouth Cream Company Fountain.....	Don't think there is much difference. Don't know of any difference.	".....	Good.....	Bad.....	.....
York.....	Don't know of any difference.	".....	Between the hills and in the woods.	Wood'n d'right into a lot.	.....
North Norwich.....	Don't know of any difference.	".....	In the valley.	Good.....	.....
Simyrna Hill	Don't think there is any difference.	Not very clean.	In a valley.....	Th'gh wooden b'x into brook.	.....
Sherburne Four Corners...	There is a difference; the only way I know of is to pay each patron according to the cream that rises when the milk is set.	Kept clean.....	In a valley by woods and swamp.	Not good.....	.....
Pleasant Brook.....	There is a difference; don't know how it can be equalized.	Clean and neat.	On line of railroad.	Bad.....	This is said to be the oldest creamery in the county.
			Surrounded by barns.	Through open ditch in the brook.	.....

Wilcox Creamery.....	Don't think there is much difference.	Old shell; not clean.	Highway, road, hog-pen and C'n dathistles	Through floor into pool beneath factory.	.....
Baldwin.....	Don't think there is much difference.	Cle'n and good	On the highway at the base of a hill.	Into an open ditch running into the canal.	.....
Sherburne Creamery.....	There is a difference; don't know how it can be equalized.	Old building, leaks and is run down.	On highway, near swamp.	Through box and open ditch to swamp.	.....
Preston Creamery.....	None.	Bad condition.	Alongside the main road, good surroundings.	Into a creek...	.....
Excelsior.....	.....	Very clean.....	On a knoll at cross-road.	.....	.....
Crystal Springs.....	See remarks.)	Bad buildings.	In a swamp location 100 rods from main road.	Into a spring, brook and a creek about 60 rods from the factory.	.....
Chenango Creamery.....	.....	Good.....	On a side hill along main road; good surroundings.	Good.....	.....
Preston Centre.....	Can not answer.	Good and well ventilated.	In a hollow; good location.	It flows to creek 100 rods away from factory.	.....
Midland Creamery.....	There is a difference; don't know of any way to equalize it.	Neat and good repair.	On a side hill...	Open ditch....	.....
Farmers' Union.....	There is a difference; don't know how to equalize it.	Good repair; clean and neat	In Oxford.....	Open ditch to the river.	.....
Benedict.....	None.	Good and clean	In a hollow, alongside of main road.	Into Windham creek from factory.	.....
Cowles.....	Don't think there is any difference.	New and good repair, clean and neat	In lot off main road.	Open ditch from factory.	This I please seen and t
Smithville Centre.....	There is no difference.	Old buildings, need repair.	In a hollow, near main road; surroundings good.	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1893 — CHEMAN30 COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Excelsior.....	.....	Old and not very clean.	Main road; surroundings hog pen and barn.	Through floor into an open ditch.	.....
Deer Spring Creamery.....	There is a difference; don't know any way to equalize it.	Old buildings, not very clean	In a hollow; surroundings woods and house.	Open drain into creek.	.....
Coventryville Creamery...	There is a difference; don't know how to equalize it.	Build'gs good. clean as can be under circumstances.	In a hollow...	Open ditch ....	.....
King Settlement	None.	Bad.....	Good; surroundings had.	Not very good..	.....
Hull	There is a difference; don't know how to equalize it.	Good.....	Highway road; surroundings good.	Open ditch into brook.	.....
Maple Shade.....	There is no difference.	Good, and kept clean.	On main road; surroundings good.	Wooden gutters to brook.	This is a good factory; pains taken for cleanliness, and for benefiting the patrons by large returns.
Great Brook	There is no difference.	Good and clean	In a hollow on main road.	Good.....	There seems to have been considerable trouble at this factory in making good cheese, which upon investigation proved to be caused by patrons not being particular in the care of the milk and their cans; and also in disposal of dead animals about their dairies.

Stone Creamery.....	There is a difference; don't know how to equalize it.	Good.....	Valley; by main road.	Open ditch into brook.	.....
Peck, R. B.....	None.	"	Good.....	Good.....	This factory building is well planned; is in a good dairy district and ought to make good cheese.
Davis.....	There is no difference.	Good, running water.	"	Woodentrough to brook.	The water for cooling the milk is kept at an even temperature by the use of ice; and this is considered one of the best dairy districts in the county.
Amblerville.....	There is no difference.	Fair, well ventilated.	"	Wooden gutters to brook.	.....
New Berlin	There is no difference.	Fair, well ventilated.	"	Good; by a ditch.	The water for cooling the milk is kept at an even temperature by the use of ice.
Rockdale.....	There is a difference; don't know how to equalize it.	Building old, clean & neat.	Rockdale river and railroad.	Good; drain to river.	.....
Cold Spring.....	There is no difference.	New and clean.	In a hollow; by woods.	Open ditch.....	.....
Summit	Don't know of any difference.	Bad	On a hill; by woods & fields.	Bad .....	.....
Beaver Meadow Creamery.	There is a difference; don't know how to equalize it.	Bad	In a valley; by buildings and hill.	Through floor into brook.	.....
Otselic.....	There is a difference; don't know how to equalize it.	Good and clean	In village, Otselec.	Bad .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — COLUMBIA COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of pounds of milk received daily.	Number of spaces of cream required for a pound of butter.	Breed of cows.	MISCELLANEOUS.		
								Condition of factory.	Location and surroundings.	Drainage.
Columbia County Creamery..	Chatham ..	Sept. 5	Butter	12	300	6	Natives	Good	Good	Good.

ABSTRACT OF FACTORY IMPORTATIONS FOR 1888—CORTLAND COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				
								Number of pounds of butter made daily.	Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.	
.....	Virgil.....	August 2	Cheese.....	6	15	267	3,500	450	80,000	.....	.....	24
.....	Cortland.....	14	Butter.....	6½	30	700	6,000	.....	.....	.....	.....	24
.....	Homer.....	14	Cheese.....	6½	30	325	6,500	250	3,800	23	.....	23
.....	Homer.....	15	Butter.....	7	18	313	6,500	200	26,800	.....	.....	23
.....	Homer.....	16	Butter and cheese.....	6½	21	280	2,500	100	16,000	25	.....	23
.....	Cuyler.....	14	Butter.....	6	10	126	2,500	100	16,000	24	.....	23
.....	Truxton.....	18	Butter and cheese.....	6	28	400	12,000	350	68,000	.....	.....	23
.....	Cortland.....	23	Full cream cheese.....	6	20	318	6,000	175	.....	.....	.....	23
.....	Virgil.....	23	Butter and cheese.....	6	27	250	4,500	175	.....	.....	.....	23
.....	Marathon.....	25	Cheese.....	5½	24	275	4,500	100	21,500	25	.....	23
.....	Harford.....	26	Butter and cheese.....	12	16	300	3,000	100	.....	.....	.....	23
.....	Lapeer.....	26	Cheese.....	6	20	261	3,214	.....	.....	.....	.....	23
.....	Marathon.....	29	.....	5½	18	225	4,800	.....	.....	.....	.....	23
.....	Lapeer.....	30	Butter and cheese.....	6	14	240	2,800	80	8,000	38	.....	23
.....	Freetown.....	31	Cheese.....	5½	18	250	3,500	.....	.....	.....	.....	23
.....	Freetown.....	31	Butter.....	6½	12	200	2,900	180	29,000	21½	.....	23
.....	Marathon.....	Sept. 1	Cheese.....	7	16	300	5,100	.....	.....	.....	.....	23
.....	Freetown.....	6	Butter and skim cheese.....	6½	31	500	7,000	120	15,000	50	.....	23
.....	Freetown.....	7	.....	6½	35	675	12,000	500	80,000	23	.....	23
.....	Cincinnati.....	11	"	6	7	225	2,700	110	18,000	28	.....	23
.....	Willett.....	11	"	5½	14	150	2,500	65	11,700	23½	.....	23
.....	Taylor.....	12	"	5	19	200	3,000	80	6,800	25	.....	23
.....	Cincinnati.....	12	Butter.....	6	5	180	2,500	112	16,000	21	.....	23
.....	Taylor.....	15	Butter and skim cheese.....	6	38	596	7,000	150	2,800	30	.....	23
.....	Taylor.....	13	Butter and cheese.....	6	13	260	3,200	110	16,000	27½	.....	23
.....	Cincinnati.....	14	"	6	25	330	6,000	250	60,000	26	.....	23
.....	Taylor.....	15	"	6	15	250	4,000	100	15,000	38	.....	23
.....	Cuyler.....	15	Butter.....	6	10	160	1,700	95	16,000	24	.....	23

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Keeney	Cuyler	Sept. 18	Butter and cheese	6	8	180	2,900	130	23,400	22	21
Cold Spring Creamery.....	Cuyler	18	"	6	27	300	5,000	150	6,000	29	23
Cuyler Hill.....	Cuyler	19	"	6	15	300	6,000	150	24,000	43	.....
Whitemarsh	Cuyler	20	Cheese	6½	5	150	2,500	.....	.....	.....	.....
Stevens, C.....	Truxton	25	Butter and cheese.....	6	8	200	4,000	75	12,000	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Davis	Full cream	40	10	50,000	10	8½	.....	All kinds.
Cortland Creamery .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
Homer West Hill	Full cream	50	10	80,000	10	8	No ..	All kinds.
Homer Valley Creamery .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
East Homer	Skim	48	7	50,000	.....	3½	No ..	All kinds.
Cuyler Creamery .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
Truxton Creamery	Skim cheese	60	15	162,000	.....	4	.....	All kinds.
Sears	Full cream	54	10	100,000	10	9	.....	All kinds.
Virgil Spring Creamery	Skim	53	6	36,000	14	4	.....	All kinds.
Marathon	Full cream	40	10	60,000	10	8½	.....	All kinds.
Bloomer John	Munster, Neuchatel, Fromage De Brie, hand cheese, Swiss cream.	60	5	100,000	9½	.....	.....	All kinds.
Carson	Full cream	56	8	170,000	9.75	9	.....	All kinds.
Mechan	Full cream	50	8	80,000	9½	8½	Yes...	All kinds.
Hunt's Corners Cream'ry	Skim	55	4	35,000	12½	7½	.....	Mostly Durhams.
Shephard	Full cream	50	7	75,000	9½	8½	.....	All kinds.
Martin .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
Wightman	Full cream	50	11	79,566	10	9.46	Yes...	All kinds.
Wright Creamery	Night skim	60	12	240,000	12	8½	No ..	All kinds.
Maple Shade Creamery	Half skim	45	16	45,000	7	7½	.....	All kinds.
Crittenden	Skim	47	6	24,000	12½	8	.....	All kinds.
Willett's	Skim	48	4	35,000	11	6	.....	All kinds.
Taylor	Skim	48	6	54,000	11	6	.....	All kinds.
Orittenden .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
Taylor Centre	Half skim	55	10	21,000	12½	6	.....	All kinds.
Hawley	Half skim	56	6	55,000	12½	6½	.....	All kinds.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Cillinghast.....	Skim	48	8	.....	1	4	.....	All kinds.
Wight Bros.....	Half skim	58	6	60,000	13	6½	.....	All kinds.
Cuyler Creamery .....	.....	.....	.....	.....	.....	.....	.....	All kinds.
Keeney.....	Full cream	60	6	26,000	9	5	.....	All kinds.
Cold Spring Creamery	Skim	45	8	30,000	14	4	.....	All kinds.
Cuyler Hill.....	Full cream	55	7	60,000	13½	5	.....	All kinds.
Whitemarsh	Full cream	60	6	40,000	10	8½	.....	All kinds.
Stevens, C.....	Half skim	60	6	64,000	12	7	.....	All kinds.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Davis	Feed, bran and sowed corn.	None.	.....	Have had some; cause, weeds in pasture.
Cortland Creamery	Bran, corn and meal	"	.....	None.
Homer West Hill .....	.....	"	.....	None; cause, unwholesome water.
Homer Valley Creamery....	Cabbage and sowed corn.	"	.....	None.
East Homer .....	.....	"	.....	None.
Ouyler Creamery	Sowed corn.	"	.....	None.
Truxton Creamery	None.	None.	.....	None.
Sears	Sowed corn and bran.	"	.....	Quite a good deal.
Virgil Spring Creamery	Bran.	"	.....	None.
Marathon	Bran.	"	.....	None.
Bloomer, John .....	.....	"	.....	None.
Carson	Bran. and sowed	"	.....	Cause, don't know.
Meachan	corn.	"	.....	Some; cause, hot weather.
Hunt's Corners Creamery..	Bran. and sowed	"	.....	Cause, carrion in pasture.
Shepard	corn.	"	.....	None.
Martin .....	.....	"	.....	None.
Wightman .....	.....	"	.....	None.
Wright Creamery	Nearly all	"	It injures it	None.
Maple Shade Creamery....	Bran and sowed corn.	"	.....	Because animal heat is not taken out.
Orittenden	Bran.	"	.....	None.
Willet's	Bran, middlings and sowed corn.	Yes.	.....	None.
Taylor	Bran, sowed corn and millet.	None.	.....	None.
Orittenden	All kinds.	"	.....	Cause; heat.
Taylor Centre	Bran.	"	.....	None.
Hawley .....	.....	"	.....	None.
Oillinghast .....	.....	"	.....	Had some; cause, extreme hot weather.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Wight Bros.....	Bran.	None.	.....	None.
Cuyler Creamery.....	.....	.....	.....	None.
Keeney	Sowed corn.	†	No bad effects, as the farmers use other feed with whey.	None.
Cold Spring Creamery.....	Bran and sowed corn.	.....	.....	None.
Cuyler Hill .....	.....	†	Hurts the quality of butter and cheese in every way.	None.
Whitemarsh	Corn fodder.	.....	.....	None.
Stevens, C	Sowed corn.	.....	.....	None.

* Some feed buttermilk. † Some do. They have.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- CORTLAND COUNTY -- (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Davis.....	Fair.....	Good.....	Good.....	.....
Cortland Creamery	Good.....	In Cortland village...	.....	.....
Homer West Hill	Clean	Good.....	Good.....	.....
Homer Valley Creamery	Good.....	On side hill	.....	.....
East Homer.....	Clean and neat.	Good.....	Good; on side hill.	.....
Cuyler Creamery.....	Old, but in fair condition.	Side hill ...	Good.....	.....
Truxton Creamery.....	Good.....	Good.....	Fair.....	.....
Bears	Extra nice and clean	.....	Side hill ...	.....
Virgil Spring Creamery.....	Very good.	Level gr'nd	Good.....	.....
Marathon.....	Good.....	Good.....	Good.....	.....
Bloomer, John.....	Not very good.	Good.....	Poor.....	.....
Carson	Good.....	"	Good.....	.....
Meachan	"	"	"
Hunt's Corners Creamery.....	Fair condition.	Side hill ...	" .....	.....
Shepard.....	Good.....	Good.....	" .....	.....
Martin	Good.....	" .....	" .....	.....
Wightman	"	"	"
Wright Creamery	"	"	In small creek.	.....
Maple Shade Creamery.....	"	Side hill ...	Good.....	.....
Crittenden	"	Level gr'nd	Bad .....	.....
Willett's.....	Good.....	Good.....	Good.....	.....
Taylor.....	"	Side hill ...	" .....	.....
Crittenden	"	Good.....	On side hill	.....
Taylor Centre	"	Side hill ...	Good.....	.....
Hawley.....	"	Good.....	Good.....	.....
Cillinghast.....	"	"	Fair.....	.....
Wight Bros	"	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — CORTLAND COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Cuyler Creamery	Good.....	Good.....	Side hill ...	.....
Keeney	"	"	Good.....	.....
Cold Spring Creamery	"	"	Fair.....	.....
Cuyler Hill	Clean .....	" .....	" .....	.....
Whitemarsh	Fine	"	High gr'nd	.....
Stevens, C.	Fair.....	Side hill ...	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—DELAWARE COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Walley Creamery.....	Tompkins.....	July 26	Butter.....	6	22	287	5,000	275	25,000	22	.....
.....	Tompkins.....	27	".....	6	14	273	4,500	150	18,000	22	.....
.....	Sidney.....	30	".....	6½	12	116	3,000	130	14,000	24	24
.....	Franklin.....	31	Cheese.....	6	19	.....	5,000	.....	.....	.....	.....
.....	Franklin.....	August 1	Butter and cheese.....	6	18	.....	3,500	100	15,000	40	28
.....	Franklin.....	2	Butter.....	6	14	219	3,500	175	21,500	22	23
.....	Franklin.....	2	Butter and cheese.....	6	18	360	4,000	100	18,000	50	23
.....	Hampden.....	3	".....	6	12	230	3,500	100	20,000	27	27
.....	Franklin.....	3	".....	6	28	427	3,500	185	33,700	50	23
.....	Walton.....	6	Butter.....	6	16	.....	3,500	175	32,000	22	23
.....	Tompkins.....	7	Butter and cheese.....	6½	32	490	3,500	340	71,400	24	24
.....	Depoit.....	8	".....	6½	40	542	7,800	330	59,400	23½	24
.....	Masonville.....	10	".....	6½	29	417	6,500	275	49,500	25	25½
.....	Masonville.....	11	".....	6½	32	454	7,000	315	60,800	23	27
.....	Depoit.....	13	".....	6	22	375	6,300	200	36,000	30	23
.....	Masonville.....	14	".....	6½	56	660	10,500	450	88,000	24½	26

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — DELAWARE COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Walley Creamery.....	.....	.....	.....	.....	.....	.....	Native, crossed with Jerseys.
Trout Creek Creamery...	.....	.....	.....	.....	.....	.....	Native, crossed with imported cows.
Crystal Spring Creamery	.....	.....	.....	.....	.....	.....	Grades.
Bartlett Hollow	Full cream	12	90,000	10	9½	Yes...	Grades.
Arcelle Creamery.....	Night skim.....	7	6,600	12¼	7	.....	Grades, Jerseys.
Mills' Creamery.....	.....	.....	.....	.....	.....	.....	Grades, Jerseys.
Ogden Creamery.....	Night skim.....	8	80,000	12	7½	Yes...	Grade Jerseys and Holsteins.
Munsdale Creamery	Night skim.....	6½	59,000	10¼	7½	.....	Grade Jerseys and native.
Croton Creamery.....	Night skim.....	14	2,520	12½	7½	No....	Natives, crossed with imported stock.
Little York Creamery....	.....	.....	.....	.....	.....	Yes...	Native, crossed with natives and Durham.
Cannonville Creamery...	Skim	12	50,500	16	5	.....	Native, crossed with Jersey and Holstein.
Cold Spring Creamery...	Skim	9	4,800	16	.....	.....	Natives.
Willis Creamery.....	Skim	10	42,000	15	.....	.....	Natives.
East Masonville Cream'y	Skim	11	3,115	16	.....	Yes..	Natives and grades.
Barbourville Creamery..	Skim	9	47,100	16	6	No....	Native, crossed with Ayreshire.
Masonville Creamery...	Skim	17	82,500	14½	.....	.....	All kinds.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- DELAWARE COUNTY -- (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Walley Creamery	Grass and hay.	None.	.....	None.
Trout Creek Creamery	Grass and hay; skimmed milk by one patron only; against the rules of the factory.	.....	.....	None.
Crystal Spring Creamery ..	Grass, wheat and middlings.	None.	.....	None.
Bartlett Hollow	Grass, hay, bran and meal.	"	.....	Cause, weeds eaten by cows in pasture.
Arctic Creamery	Grass and wheat shorts.	"	.....	Had once; cause, cows eating foul feed, leeks.
Mills' Creamery	Grass, hay, corn meal and wheat bran.	"	.....	None.
Ogden Creamery	Grass, wheat, shorts and middlings.	"	.....	Have had; cause, foul weeds, leeks in pasture.
Munsdale Creamery	Grass, hay, corn meal and wheat middlings.	Some have for a few days.	Taints the milk, makes the cheese work quick and sours the curd.	Have had; cause, feeding whey; stopped when it was discovered.
Croton Creamery	Grass, corn meal and wheat middlings.	None.	.....	Have had; cause, cows eating a weed which taints the milk.
Little York Creamery	Grass, hay, corn meal and wheat bran.	"	.....	None.
Cannonville Creamery	Grass, hay, corn meal, wheat bran and millet.	"	.....	None.
Cold Spring Creamery	Grass, hay, corn meal and wheat bran.	"	.....	Have had; cause, not known.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — DELAWARE COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Willis Creamery.....	Grass, millet, sowed corn and hay.	None.	.....	Have had; cause, want of ventilation in cans.
East Masonville Creamery.	Grass, wheat bran, oats, hay and corn meal.	"	.....	None.
Barbourville Creamery.....	Grass, hay, corn meal and bran.	"	.....	None.
Masonville Creamery.....	Grass, meal, and wheat bran.	"	.....	Have had; cause, fed in pasture in dry, warm weather; cans being closed, which kept in the animal heat; no serious complaint.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — DELAWARE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Waller Creamery.....	Not different enough in the different ways to be noticeable.	With running water; neat and clean.	On the side-hill.	By sewer to creek.	.....
Trout Creek Creamery		Good.....	On high ground near creek.	Covered sewer into creek.	.....
Crystal Spring Creamery..		Clean and fair.	On hillside.	Covered drain to a meadow.	The butter-milk is all taken by patrons; nothing to drain off but the water used in cleaning the factory.
Bartlett Hollow		Old building; neat & sweet.	On a brook....	Covered drain to creek.	.....
Arctic Creamery		New building, within a year	On a brook....	Covered drain into brook.	.....
Mills' Creamery	ished. There is a very little difference in quality.	Large size; kept well and clean.	Location, North Franklin, near Oule-out creek.	Covered drain into open ditch to creek.	.....
Orden Creamery	There is no perceptible difference.	New and in good repair.	Near Croton creek; ground descending to the creek.	Covered drain to brook.	.....
Munsdale Creamery.....	Very little difference in quality.	New, commodious vats and coolers.	Near Walton creek.	Covered drain to brook.	.....
Croton Creamery.....	All considered good; there is very little difference in quality.	New, commodious vats, presses, etc.	Near branch of Ouleout creek.	Covered drain and open ditch to creek.	.....
Little York Creamery.....	Have set each farmer's milk separately for cream; find but very little difference in the amount raised, averaging about twenty per cent.		Near Loomis creek.	Covered drain into brook.	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — DELAWARE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Cannonville Creamery....	Have tested the milk and find it does not vary one per cent. There is a difference in the amount of butter made by different dairies; but know of no way of getting exact basis; do not consider the cream gauge an accurate test; nor do I consider weighing accurate. There is very little difference.	Good.....	Near Delaware river.	Covered drain into river.	.....
Cold Spring Creamery		"	Town of Deposit, near Cold Spring brook.	Drain into brook.	.....
Willie Creamery		"	Location on Deposit and Masonville road.	Covered drain into brook.	.....
East Masonville Creamery.		"	Located near Spring brook.	Open drain into brook.	This factory is making pot-cheese. There is a difference in the quality; but know of no way to equalize it; do not test of cream gauges some mill larger per cent of cream actually makes less butter than other milk showing a less per cent. the less being more solid and making more butter.
Farbournville Creamery.....		Rather old; on Cold Spring creek.	On Cold Spring creek.	Drain to brook.	
Masonville Creamery.....	Find very little difference in the value: hav'n tested ten different dairies for cream and for butter.	Good.....	Near Masonville and Bainbridge road.	Covered drain to Bennett creek.	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ERIE COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Morton Corners	West Concord	Aug. 19	Cheese	7	58	420	7,500	...	...	...	...
Seisson, Daniel	Collins	Sept. 14	"	8	...	30	375	...	...	...	...
Marshfield	North Collins	17	"	7	13	280	3,200	...	...	...	...
White Clover	Sardinia	17	"	7	40	475	5,746	...	...	...	...
Johnsonburgh	Chaffee	17	"	6	16	160	2,000	...	...	...	...
Springville	Concord	17	"	9	60	600	10,000	...	...	...	...
Richmond, No. 10	Sardinia	17	"	6	16	140	1,800	...	...	...	...
Matteson Corners	Sardinia	17	"	7	35	245	3,700	...	...	...	...
Chaffee, No. 1	Sardinia	17	"	6	11	100	1,200	...	...	...	...
Henshaw	Sardinia	18	"	7	12	245	2,100	...	...	...	...
North Branch	North Collins	18	"	8	53	550	6,100	...	...	...	...
Estes, No. 23	Brant	18	"	6	27	300	3,145	...	...	...	...
Sisson, George	Collins	18	"	8	22	480	4,300	...	...	...	...
Smith, No. 9	Concord	18	"	7	23	450	4,200	...	...	...	...
Vances	East Concord	18	"	8	18	220	3,700	...	...	...	...
East Concord, No. 3	East Concord	18	"	7	9	150	1,500	...	...	...	...
Crossman	Sardinia	18	"	7	12	135	1,800	...	...	...	...
Sardinia	Sardinia	18	"	7	15	200	2,400	...	...	...	...
Newton	Sardinia	18	"	5	10	80	1,083	...	...	...	...
Glenwood, No. 8	Golden	19	"	7	24	150	1,600	...	...	...	...
Boston	North Collins	19	"	6	24	325	2,900	...	...	...	...
Colden Hill, No. 7	Concord	19	"	5½	13	85	1,300	...	...	...	...
North Concord, No. 8	Concord	19	"	6	13	150	2,433	...	...	...	...
Concord Centre, No. 7	Concord	19	"	7	82	230	4,100	...	...	...	...
Waterville	Concord	19	"	9	19	240	2,400	...	...	...	...
Dye, No. 5	Concord	19	"	7	25	155	2,800	...	...	...	...
Collins Centre	Collins	20	"	7	37	680	8,000	...	...	...	...
New Oregon	North Collins	20	"	7	23	250	3,260	...	...	...	...
Tabor	North Collins	20	"	8	52	575	5,700	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FAIR COUNTY. — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.	
Marshfield, West Branch.	Collins.....	Sept. 21	Cheese.	7	17	200	8,200	..	.....	.....	.....	..
Marshfield, East Branch.	North Collins.....	22	"	8	29	500	5,100	..	.....	.....	.....	..
White's.....	Collins.....	22	"	7	22	350	4,000	..	.....	.....	.....	..
Zore	Collins.....	22	"	6	15	200	2,500	..	.....	.....	.....	..
Scrabble Hill	Collins.....	22	"	7	18	295	2,985	..	.....	.....	.....	..
Gowanda, No. 4.....	Collins.....	22	"	7	28	475	4,800	..	.....	.....	.....	..
New Michigan.....	Collins.....	23	"	7	16	180	2,200	..	.....	.....	.....	..
Holland	Holland.....	24	"	7	50	430	4,300	..	.....	.....	.....	..
Clark's	Collins.....	24	"	7	13	150	1,800	..	.....	.....	.....	..
North Boston	Boston.....	24	"	6	50	300	3,200	..	.....	.....	.....	..
Colden Centre.....	Colden.....	25	"	6½	32	366	3,660	..	.....	.....	.....	..
Enod Hollow.....	Colden.....	25	"	6½	47	290	2,900	..	.....	.....	.....	..
South Colden	Colden.....	29	"	7	43	450	4,500	..	.....	.....	.....	..
East Holland	Holland.....	26	"	7	45	450	4,456	..	.....	.....	.....	..
Protection	Holland.....	26	"	6	30	265	2,400	..	.....	.....	.....	..
Boston Centre	Boston.....	26	Lim'b'rg'r and whey b't'r.	6	10	75	800	3½	500	.....	16	..
Eckhardt... ..	Eden.....	28	Cheese and whey butter..	5	21	100	1,100	7	.....	100	15	..
Switzer.....	Eden.....	28	Butter and cheese.....	6	14	95	900	4	700	100	15	..
Hunters' Creek.....	Wales.....	28	Cheese.....	7	41	510	5,000	..	.....	.....	.....	..
Swiss.....	Hamburgh.....	28	Cheese and whey butter..	6	14	129	1,200	7	1,800	100	15	..
East Hamburgh, No. 18	East Hamburgh..	29	Cheese.....	5½	28	250	2,300	..	.....	.....	.....	..
Newton's.....	East Hamburgh ..	29	"	7	18	275	2,500	..	.....	.....	.....	..
Wales Centre	Wales.....	29	"	7	46	575	5,300	..	.....	.....	.....	..
Wales Hollow	Wales.....	29	"	7	41	575	5,360	..	.....	.....	.....	..
East Aurora	Aurora	29	"	7	26	275	2,600	..	.....	.....	.....	..
Willink	East Aurora.....	Oct. 4	"	5	25	200	4,000	..	.....	.....	.....	..
Porterville, No. 21	Marilla	4	"	6	50	250	1,900	..	.....	.....	.....	..
Cloverfield, No. 25	Marilla	4	"	5	32	275	2,100	..	.....	.....	.....	..
Marilla Creamery	Marilla	4	Butter and cheese.....	12	22	340	2,400	130	.....	23	25	..

Spring Creek	Alden	5	"	"	"	12	27	300	2,300	75	30,000	25	27
Pontiac	Evans	9	Cheese	"	"	5	23	250	2,200	.....	.....	.....	.....
Farmham	Brandt	9	"	"	"	6	28	175	3,000	.....	.....	.....	.....
Stickney	Brandt	9	"	"	"	6	12	150	.....	.....	.....	.....	.....
Evans Centre	Evans	10	"	"	"	6	11	150	700	.....	.....	.....	.....
Eden Centre	Eden	10	"	"	"	6	30	150	1,500	.....	.....	.....	.....
Brandt	Brandt	9	"	"	"	6	35	350	2,000	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FAIR COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Morton Corners	Colored; full cream ..	55½	13	110,000	10¼	9	Native and Holstein.
Seisson, Daniel	Colored; full cream ..	60½	10	127,000	10.30	9	Jerseys, natives and Durhams.
Marshfield	Colored; full cream ..	60	6	90,000	10.25	9	Holstein, Jerseys and native.
White Clover	Colored; full cream ..	60	10	130,000	10.15	9	Holstein and natives.
Johnsonburgh	Colored; full cream ..	60	3	38,000	10	9	Holstein and native.
Springville	Colored; full cream ..	60	16	150,000	10.8	9	Holstein and native.
Richmond, No. 10	Colored; full cream ..	60	3	48,000	10.25	9	Holstein and native.
Matteson Corners	Colored; full cream ..	60	6	83,000	10¼	9	Native grade and Holstein.
Chaffee, No. 1	Colored; full cream ..	60	5	28,000	10.14	9	Holstein and natives.
Henshaw	Colored; full cream ..	60	4	30,000	10	9	Holstein, natives and mixed.
North Branch	Colored; full cream ..	60	10	180,000	10.21	9	Holstein, native and Durhams.
Eates, No. 22	Colored; full cream ..	60	5	55,000	10.1-5	9	Native, Holstein and Jerseys.
Elison, George	Colored; full cream ..	60	7	120,000	10.15	9	Native grade and Holstein.
Smith, No. 9	Colored; full cream ..	60	7	120,000	10	9	Native, Holsteins and Jerseys.
Vanco	Colored; full cream ..	52	7	65,000	10	9	Native, Holsteins and natives.
East Concord, No. 3	Colored; full cream ..	35	5	30,000	10	9	Holsteins and natives.
Crossman	Colored; full cream ..	50	4	24,000	10.3	9	Holstein and natives.
Rardinia	Colored; full cream ..	35	2	20,000	10.30	9	Holstein and natives.
Newton	Colored; full cream ..	60	2	50,000	10¼	9	Native and Holsteins.
Glenwood, No. 8	Colored; full cream ..	60	5	72,000	10.2-6	9	Holsteins, Jerseys, Durhams and natives.
Boston	Colored; full cream ..	60	2	39,000	10¼	9	Native
Colden Hill, No. 7	Colored; full cream ..	60	2	45,000	10.16	9	Native
North Concord, No. 8	Colored; full cream ..	60	4	100,000	10¼	9	Native
Concord Centre, No. 7	Colored; full cream ..	60	7	70,000	10¼	9	Native
Waterville	Colored; full cream ..	33	8	67,000	10.25	9	Mixed
Dye, No. 5	Colored; full cream ..	60	5	210,000	10½	9	Mixed natives, Holst., Ayrshires and Jerseys.
Collins Centre	Colored; full cream ..	60	13	110,000	10¼	9	Native grade and Holstein.
New Oregon	Colored; full cream ..	60	6	175,000	10.15	9	Mixed Holstein, Durham and native breeds.
Tabor	Full cream	60	10	54,000	10¼	9	Native, grade, Durham and Jerseys.
Marshfield, West Branch	Full cream	65	6	140,000	10½	9	Mixed natives Holsteins and Durhams.
Marshfield, East Branch	Full cream	60	9				

Whites'.	Full cream	60	7	100,000	10.33	9	No	Mixed Holstein, Jerseys and natives.
Zore	Full cream	60	5	50,000	10.36	9	Yes	Mixed Holstein, Durhams and natives.
Scrabble Hill	Full cream	60	5	80,000	10.3	9	Yes	Mixed Holstein, Durhams and Jerseys.
Gowanda, No. 4	Full cream	60	8	125,000	10.26	9	Yes	Mixed Holstein and natives.
New Michigan	Full cream	60	4½	65,000	10½	9	Yes	Mixed Holstein and natives.
Holland	Full cream	60	8	132,000	10½	9	Yes	Mixed Holstein and natives.
Clark's	Full cream	60	3	50,000	10½	9	Yes	Mixed Holstein and natives.
North Boston	Full cream	60	10	75,000	10½	9	No	Mixed Holstein and natives.
Couden Centre	Full cream	60	6	105,000	10.15	9	Yes	Mixed Holstein and natives.
Enod Hollow	Full cream	60	5	75,000	10½	9	Yes	Mixed Holstein and natives.
South Colden	Full cream	60	11	120,000	10½	9	Yes	Mixed Holstein and natives.
East Holland	Full cream	60	8	115,000	10.25	9	Yes	Mixed Holstein and natives.
Protection	Full cream	60	4	70,000	10½	9	Yes	Mixed Holstein and natives.
Boston Centre	Limburger	1½	50	12,000	17	13	Yes	Mixed Holstein and natives.
Beckhardt	Swiss and Limburger	1½	50	15,000	13	11½	Yes	Mixed Holstein and natives.
Switzer	Swiss	75	1	30,000	13	11½	Yes	Mixed Holstein and natives.
Hunters' Creek	Limburger	61	1	130,000	10½	9	Yes	Mixed Holstein and natives.
Swiss	Swiss	100	1	20,000	10	11½	Yes	Mixed Holstein and natives.
East Hamburg, No. 18	Full cream	64	4	72,000	10.30	9	Yes	Mixed Holstein, Durhams, natives.
Newton's	Full cream	30	8	60,000	10½	9	Yes	Mixed Holstein, Durhams, natives.
Wales Centre	Full cream	62	10	169,000	10½	9	Yes	Mixed Holstein, Durhams, natives.
Wales Hollow	Full cream	60	9	150,000	10½	9	Yes	Mixed Holstein, Durhams, natives.
East Aurora	Full cream	60	5	65,000	10½	9	Yes	Mixed Holstein, Durhams, natives.
Willink	Full cream	60	6	36,000	10½	9	Yes	Mixed Holstein and Jerseys.
Porterville, No. 21	Full cream	60	4	118,000	10½	9	Yes	Mixed Holstein and Jerseys.
Gloverfield, No. 25	Full cream	60	4	60,000	10½	9	Yes	Mixed Holstein and Jerseys.
Marilla Creamery	Skim	45	3	.....	14½	5½	No	Mixed Holstein, Jerseys, Durhams and natives.
Spring Creek	One-half skim	50	3	61,000	16	4	Yes	Mixed Holstein, Jerseys, Durhams and natives.
Pontiac	Full cream	60	4	60,000	10½	9	Yes	Mixed Holstein, Jerseys and natives.
Farnham	Full cream	60	6	60,000	10½	9	Yes	Mixed Holstein, Jerseys and natives.
Stickney	Colored full cream	30	14	30,000	10½	9	Yes	Mixed Holstein, Jerseys and natives.
Evans Centre	Colored full cream	32	4	40,000	10.3-10	9	Yes	Mixed Holstein, Jerseys, Durhams and natives.
Eden Centre	Colored full cream	6	3	40,000	11	9	Yes	Mixed Holstein, native and Durhams.
Brandt	Colored full cream	60	6	63,000	10½	9	Yes	Mixed Holstein, Jerseys and natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FARM COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Morton Corners	Grass, corn fodder, bran and middlings.	None.	Makes a whey smell in the curd and a poor porous cheese.	Have had; cause, milk not dipped enough in the warm weather to allow the animal heat to pass off.
Scisson, Daniel	Grass and corn fodder.	"	Would make a tainted milk and a cheese that would not keep.	Yes, some; cause, warm weather and negligence on the part of patrons.
Marshfield	Grass, corn fodder and grain.	"	Makes a sour and leaky cheese.	Yes; cause, warm weather, and some from a polluted air in which the milk is kept.
White Clover	Grass, corn and middlings.	"	Makes a puffy cheese with an offensive smell.	Yes, some; cause, warm weather, sour cans, driving the cows too fast before milking and not properly stirring and cooling the milk.
Johnsonburgh	Grass, corn and middlings.	"	Makes a thin milk and poor cheese.	Some; cause, poor water and not properly cooling milk after milking.
Springville	Grass, corn fodder and middlings.	"	Makes a slippery curd and a cheese that will not keep well.	Yes; cause, improper care of milk and cans.
Richmond, No. 10	Grass, corn fodder and middlings.	"	Gives an offensive smell to the curd and cheese.	Often; cause, warm weather and failure on the part of patrons to properly stir and get the animal heat out of the milk, and, also, leaving the milk too near bad barns over night.
Matteson Corners	Grass, corn fodder and middlings.	"	Makes the cheese made from this milk porous and poor and will not keep well.	Have had; cause warm weather and improperly caring for the milk and cans, and driving cows fast previous to milking them.
Chaffee, No. 1	Grass, corn and middlings.	"	Makes a porous curd and cheese that will not keep long.	Yes, some; cause, warm weather and negligence in cleaning cans and tending cows.
Henshaw	Grass and corn fodder.	"	Makes an offensive smell and requires more milk to make a pound of cheese.	Yes; cause, hot weather, improper care of milk and cans.
North Branch	Grass, corn fodder and grain.	"	Would cause a bitter taste and hurts the flavor of the cheese.	Yes; cause, neglected cans at times, but most frequently from the feeding of meal in warm weather, which causes an overheating of milk.
Estes, No. 22	Grass, corn fodder and corn cobs.	"	Makes a tainted milk and porous poor curd.	Yes; cause, warm weather, improper care of milk and cans.

Hanson, George	Grass, corn fodder and grain.	"	It causes milk to taint in a short time, and cheese is of bad flavor.	art of preparing for the
Smith, No. 2	Grass, corn fodder and middlings.	"	It would make thin, blue milk and poor cheese.	cleaning the milk
Vance	Grass and corn fodder.	"	Causes a fermentation in the cheese in warm weather and sours it.	heat milk.
East Concord, No. 3	Grass and corn fodder.	"	Would make a sour cheese, and would not be worth making up.	and not as milk; is a bad
Croesman	Grass and corn fodder.	"	Makes a very poor cheese, which will not keep.	care.
Sardinia	Grass, corn fodder and middlings.	"	Slippery, porous curd and cheese that will not keep.	Yes; cause, improper care of cans and milk; hot weather and cows drinking impure water.
Newton	Grass and corn fodder.	"	Makes a poor and puffy cheese.	
Glenwood, No. 8	Grass and corn fodder.	"	Taints the milk and makes porous curd.	
Boston	Grass, corn fodder and grain.	"	Makes more milk and a poor and porous cheese.	
Colden Hill, No. 7	Grass and corn fodder.	"	It makes a poor, porous curd and puffy cheese.	
North Concord, No. 5	Grass and corn fodder.	"	It would make slippery and porous curd which would have bad odor.	
Concord Centre, No. 7	Grass, corn fodder and grain.	"	It would make a poor curd and poor cheese.	
Waterville	Grass, corn fodder and bran.	"	It would make porous curd and bad smelling, porous cheese.	
Dye, No. 5	Grass and corn fodder.	"	Makes a slippery and porous cheese that would not keep.	
Collins Centre	Grass, corn fodder and grain.	"	Tainted smell.	
New Oregon	Grass, corn fodder and grain.	"	It makes a slippery, porous curd and puffy cheese of poor keeping qualities.	
Tabor	Grass, corn fodder and grain.	"	Makes a porous and poor cheese generally.	
Marshfield, West Branch	Grass, corn fodder and middlings.	"	It sours quickly and taints all the milk; produces cheese of poor-keeping qualities and poor flavor.	
Marshfield, East Branch	Grass, corn fodder and grain.	"	Do not know; never had any experience.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ERIE COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
White's	Grass, corn fodder and grain.	None.	Makes a porous curd and cheese that will not keep well.	Yes; cause, warm weather, but most frequently from bad odors in the pastures where cows feed, such as is caused from dead animals.
Zore	Grass and corn fodder.	"	Poor curd and a cheese that will not keep.	Yes; cause, hot weather, improper care of cans and milk.
Scrabble Hill	Grass and corn fodder.	"	Makes tainted milk and leaky cheese.	Yes; cause, warm weather, bad water and air.
Gowanda, No. 4	Grass, corn fodder and grain.	"	Makes a sour, leaky cheese.	Yes; cause, negligence in cleaning cans and poor water for cows.
New Michigan	Grass and corn fodder.	"	Makes it sour or tainted.	Yes; improper care of cans and milk; fast driving of cows.
Holland	Grass, corn fodder and grain.	"	Taints the milk; makes poor cheese.	Yes; cause, hot weather; leaving cans in foul air; fast driving of cows.
Clark's	Grass and corn fodder.	"	It would cause a slippery curd.	Yes, some; cause, warm weather and allowing milk to remain in impure and tainted air.
North Boston	Grass, corn fodder and grain.	"	It would make a leaky, puffy cheese.	Have had some; cause, neglect to properly cleanse cans, not dipping the milk to allow animal heat to escape, and setting the milk over night where there is a stench.
Couldon Centre	Grass, corn fodder and grain.	"	Causes the milk to sour, and makes a porous cheese.	Yes; warm weather, negligence to stir and sufficiently cool the milk.
Enod Hollow	Grass, corn fodder and grain.	"	The cheese made from such milk would be sour, moist and heavy, and has poor keeping qualities.	Have had some; cause, negligence in not dipping and aerating the milk, especially in warm nights.
South Colden	Grass, corn fodder and grain.	"	Gives it a peculiar smell and will not make as good a cheese.	Yes; cause, hot weather; allowing cans to stand in foul air.
East Holland	Grass, corn fodder and grain.	"	It would cause an offensive odor to arise immediately on heating the milk.	Yes; cause, extremely warm weather, without sufficient care.
Protection	Grass, corn fodder and grain.	"	It would make a slippery, porous curd, and the cheese made therefrom would be porous and puffy.	Yes; cause, forgetfulness or negligence on the part of the patrons to cool the milk and remove the animal heat.

Boston Centre.....	Grass, corn fodder and grain.	"	It would produce a sour smelling milk and a puffy cheese.	Yes; cause, improper care of cans and milk.
Eckhardt	Grass, corn fodder and grain.	"	Do not know.	Yes; cause, hot weather; improper care of cans and milk.
Switzer	Grass, corn fodder and grain.	"	Don't know.	Yes; improper care of cans and milk; driving cows too fast.
Hunter's Creek.....	Grass, corn fodder and grain.	"	Makes sour curd.	Yes; cause, hot weather; improper care and impure air where cans are set.
Swiss.....	Grass, corn fodder and grain.	"	Do not know.	Yes; cause, hot weather; improper care of cans and milk; driving cows too fast.
East Hamburg, No. 18.....	Grass, corn fodder and grain.	"	If any of my patrons feed whey it would cause a taint in the milk.	Yes; cause, hot weather; improper care of cans and milk; driving cows too fast.
Newton's	Grass, corn fodder and grain.	"	Makes a porous cheese, with a tendency to leak and ferment in warm weather.	Yes; cause, hot weather; improper care of cans and milk.
Wales Centre.....	Grass, corn fodder and grain.	"	Makes a very poor flavored milk.	Yes; cause, improper care of milk cans.
Wales Hollow	Grass, corn fodder and grain.	"	Causes a tainted milk, leaving a taste in curd and cheese.	Yes; cause, hot weather; improper care of cans and milk.
East Aurora	Grass and corn fodder.	"	Makes a tainted milk and cheese.	Yes; cause, hot weather; improper care of cans and milk.
Willink.....	Grass and corn fodder.	"	If any should feed whey it would cause a tainted milk.	Yes; cause, hot weather; improper care of cans and milk.
Porterville, No. 21.....	Grass and corn fodder.	"	If any of my patrons feed whey, I would discontinue their milk: it makes a thin, poor milk, with a bad smell to it.	Yes; cause, hot weather; improper care of cans and milk.
Cloverfield, No. 25	Grass, corn, fodder and grain.	"	Makes a tainted milk and sour cheese.	Yes; cause, hot weather; improper care of cans and milk.
Marilla Creamery.....	Grass and corn fodder.	"	quicker and makes a better cheese.	Yes; cause, improper care of cans and milk.
Spring Creek	Grass and corn fodder.	"	had any experience.	None.
Pontiac	Grass and corn fodder.	"	and tainted milk and cheese.	Yes; cause, negligence to stir and properly cool.
Parnham	Grass and corn fodder.	"	odor when milk is set.	Yes; cause, extremely warm weather.
Stickney	Grass, corn fodder and grain.	"	had any experience.	Yes; cause, hot weather, improper care.
Evans Centre.....	Grass, corn fodder and grain.	"	Do not know, never had any experience.	Yes; cause, hot weather, improper care.
Eden Centre.....	Grass and corn fodder.	Yes ..	Cause a poor curd and sour cheese.	Yes; cause, warm weather, neglect to clean cans and improper treatment of cows.
Brandt	Grass, corn fodder and grain.	None.	Causes tainted milk, poor cheese.	Yes; cause, improper care.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—EMIE COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Morton Corners	that it is impos-	Good.....	Fair.....	Good.....	.....
Belsson, Daniel.....	milk delivered to trons are satis- fiable to raise 1.	"	Good.....	" .....	.....
Marshallfield	he only method d avoid it is the	" .....	" .....	" .....	.....
White Clover.....	s. I do not think the milk.	" .....	" .....	" .....	.....
Johnsonburgh.....	Do not think that there is any difference; at least not enough to raise this question.	Fair.....	Poor	Very poor..	.....
Springville.....	There is, but do not know how it could be equalized.	Good.....	Good.....	Good.....	.....
Richmond, No. 10.....	There is none to speak of; would not attempt to adjust it.	" .....	" .....	" .....	.....
Matteson Corners	There is some difference, but I don't think it can be equalized satisfactorily.	" .....	" .....	" .....	.....
Chaffee, No. 1	Find but very slight difference; not enough to mention.	Fair.....	"	Poor .....	.....
Henshaw.....	There is, but do not know how it could be equalized.	Good.....	" .....	" .....	.....
North Branch.....	Yes, there is a difference, yet I can not sug- gest any remedy.	"	"	Good.....	.....
Estes, No. 22	There is a difference, but do not know of any way in which it could be adjusted.	Not good..	"	Fair.....	.....
Slason, George.....	There is some difference, but I don't think it would be well to bring this question before my patrons.	Good.....	Favorable.	Excellent..	.....
Smith, No. 9.....	There is a very little difference; would not attempt to adjust it.	Good.....	Good.....	Good.....	.....
Vancee	There is a difference, but could not say how it could be equalized.	" .....	" .....	" .....	.....

East Concord, No. 3	There is very little difference in the milk; it would not do to raise that question here.	"	"	"	"
Crossman	There is but little, if any, difference.	"	"	"	"
Sardinia	There is but little, if any, difference; not enough to raise any questions among the patrons.	Fair	"	"	"
Newton	There is some, but don't know how it could be adjusted.	"	"	"	"
Glenwood, No. 8	There is; do not know how it could be equalized.	Good	"	"	"
Boston	There is; do not know how it could be adjusted.	"	"	Poor	"
Golden Hill, No. 7	There is some, but I am satisfied that it can't be equalized satisfactorily o my patrons.	"	Favorable ..	Good	"
North Concord, No. 6	There is a very little, but I don't think it advisable to bring the question of quality among my patrons.	Fair	Good	"	"
Concord Centre, No. 7	There is some difference, but I don't think it can be equalized satisfactorily to my patrons.	Good	"	"	"
Waterville	There is a very little, but I don't think it could be equalized.	"	Favorable ..	"	"
Dye, No. 5	From what tests we have made do not think there is enough difference to raise the question amongst our patrons.	"	Good	"	"
Collins Centre	Any, difference in the night to our factory.	"	"	"	"
New Oregon	Any, difference, but I don't think there is enough to bring that question before my patrons; they are satisfied with the present way.	Fair	"	"	"
Tabor	I can not in avoid.	"	"	"	"
Marshfield, West Branch ..	don't think satisfactory	Good	Favorable ..	"	"
Marshfield, East Branch ..	now how it	"	Good	"	"
White's	I can not r practical	"	"	"	"
Zore	now how it	"	"	"	"
Scrabble Hill	t enough to among the w.	"	"	"	"
Gowanda, No. 4	know of any	"	"	Fair	"
New Michigan	nee.	Fair	"	"	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ERIE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Holland	There is a difference; but so slight that I am not sure the question is worth asking.	Good.....	Good.....	Good.....	.....
Clark's	There is a difference; but so slight that I am not sure the question is worth asking.	Fair.....	Fair.....	Poor.....	.....
North Boston	There is a difference; but so slight that I am not sure the question is worth asking.	Good.....	".....	Good.....	.....
Coulden Centre	There is a difference; but so slight that I am not sure the question is worth asking.	Fair.....	Good.....	Fair.....	.....
Enod Hollow	There is a difference; but so slight that I am not sure the question is worth asking.	Good.....	".....	Good.....	.....
South Colden	There is a difference; but so slight that I am not sure the question is worth asking.	Fair.....	".....	Excellent..	.....
East Holland	There is a difference; but so slight that I am not sure the question is worth asking.	Good.....	".....	Good.....	.....
Protection	There is a difference; but so slight that I am not sure the question is worth asking.	Poor.....	".....	Very poor..	.....
Boston Centre	There is a difference; but so slight that I am not sure the question is worth asking.	".....	Good.....	Good.....	.....
Eckhardt	There is a difference; but so slight that I am not sure the question is worth asking.	Good.....	".....	Poor.....	.....
Switzer	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....
Hunters' Creek	There is a difference; but so slight that I am not sure the question is worth asking.	Very poor..	Fair.....	Good.....	.....
Swiss	There is a difference; but so slight that I am not sure the question is worth asking.	Fair.....	Good.....	First-class.	.....
East Hamburg, No. 16	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....
Newton's	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....
Wales Centre	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....
Wales Hollow	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....
East Aurora	There is a difference; but so slight that I am not sure the question is worth asking.	".....	".....	".....	.....

Willink.....	Of course there is a difference in quality of milk, yet it would not be safe to make any change in our system at present.	" .....	" .....	" .....	.....
Porterville, No. 21	There is a slight difference, but as the patrons are satisfied, would not like to raise this question.	" .....	" .....	" .....	.....
Cloverfield, No. 25.....	There is some difference; do not know how it could be equalized.	"	"	Good.....	.....
Marilla Creamery	There is a difference, but not enough to raise any question about it among patrons	" .....	" .....	" .....	.....
Spring Creek.....	There is some difference; do not know how it could be adjusted.	" .....	" .....	" .....	.....
Pontiac.....	Do not think there is difference enough to justify any change of system.	Fair.....	"	Excellent..	.....
Farmham	Yes; there is a trifling difference, yet so slight that I would not recommend any change.	"	O n l o w ground.	Poor.....	.....
Stickney	There is a difference; do not know how it could be adjusted.	Good.....	O n h i g h ground.	Good.....	.....
Evans Centre.....	There is a difference; do not know how it could be equalized.	"	O n h i g h ground.	" .....	.....
Eden Centre	There is, but as the patrons all seem satisfied, I do not think it policy to attempt to adopt a new system.	"	O n h i g h ground.	" .....	.....
Brandt	There is a difference, but think it is not best to try and equalize so long as patrons are satisfied.	Fair.....	O n h i g h ground.	Fair.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FULTON COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
The Cross Creamery	Johnstown	July 25	Butter	12	90	...	*800	150	.....	*4	28
Crossroad	Johnstown	25	Cheese	7	7	160	2,500	...	.....	.....	.....
Johnstown	Johnstown	26	Cheese	6	7	75	2,000	...	.....	.....	.....

* Cream.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FULTON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
The Cross Creamery.....	Cottage cheese.....	.....	.... 4	.....	.....	.....	.....	Native, Jerseys and Holsteins.
Crossroad	Full cream	54	3	40,000	10	8½	.....	Native.
Johnstown	Full cheese.....	60	3	35,000	10	9	Yes...	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—FULTON COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
The Cross Creamery.....	Grass, hay and some grain.	None.	.....	None.
Crossroad.....	Hay, grass and grain.	"	.....	Had very little; cause, over-feeding and neglect in dispelling animal heat from milk.
Johnstown	Grass, hay and some grain.	"	.....	Have had during hot weather; cause, improper care of milk, and setting it near the hog-pen or barn-yard.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — FULTON COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
The Cross Creamery .....	.....	First-class.	First-class.	Good.....	At this factory they calculate from the gauge from a Fairland can: give one pound butter to one gauge = 113 cubic inches.
Crossroad .....	.....	Very old...	Good.....	Bad	
Johnstown	There is a difference; do not know how to adjust it.	Old.....	.....	Good.....	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — GENESSEE COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Cold Spring Creamery	Bergen.....	Oct. 30	Butter.....	12	75	550	.....	300	28,000	.....	18
Byron	Byron.....	31	Cheese.....	6	6	183	1,000	.....	.....	.....	.....
Excelsior, No. 8	East Penbrook...	Nov. 1	"	6	35	100	1,800	.....	.....	.....	.....
Excelsior, No. 2	Sawent.....	1	"	6	60	350	4,000	.....	.....	.....	.....
Alexander	Alexander.....	2	"	6	80	500	2,021	.....	.....	.....	.....
North Star	Alexander.....	2	"	6	35	160	2,000	.....	.....	.....	.....
P. Warner	Darlen.....	3	Swiss cheese and whey butter.....	6	25	208	2,000	.....	2,000	.....	16
The Swiss	Darlen.....	3	Swiss cheese and whey butter.....	6	30	210	3,000	.....	4,500	.....	16
Cloverfield Creamery	Darlen.....	3	Butter and cheese.....	12	31	200	2,000	70	20,000	28	18
Excelsior, No. 1	Darlen.....	3	Cheese.....	7	38	325	4,800	.....	.....	.....	.....

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 — CHESENSE COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Cheese.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Cold Spring Creamery.							
Byron	Colored; shipping.	66	3	40,000	9 46	9 1/2	Mixed breeds.
Excelsior, No. 8.	Soft; colored.	50	3	24,000	10	9 1/2	
Excelsior, No. 2.	Colored; shipping.	60	6	70,000	10 1/2	9 1/2	
Alexander	Colored; shipping.	60	17	130,200	10 1/2	9	
North Star	Colored; shipping.	68	4	94,000	10 1/2	9	Native, mixed breeds. Native, mixed breeds. Native and mixed breeds.
P. Warner	Swiss	100	3	42,000	10	12	
The Swiss	Swiss	90	3	65,000	10	16	
Cloverfield Creamery	Skim and full cream.	90	4	4,000	10 1/2	2	
Excelsior, No. 1.	Colored; full cream.	60	8	95,000	10	9 1/2	

* Skim, 2 to 5; full cream, 2.

ABSTRACT OF FACTORY INSPECTORS FOR 1888—GENESEE COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Cold Spring Creamery.....	Grass and sowed corn.	None.	Think it would make very poor milk without much butter fat.	None.
Byron	Grass, grain, corn fodder, pumpkins.	"	Think it would make milk which would sour quickly, and be very injurious to the cheese.	Have had some; cause, not properly stirring and aerating the milk, also by leaves, weeds and other rubbish the cattle may pick up in their food.
Excelsior, No. 8.....	Grass and sowed corn.	"	Think it would make poor, thin milk which would not be fit for cheese.	Have none; cause, our patrons are very careful about their milk.
Excelsior, No. 2.....	Grass and sowed corn.	"	Never knew of any being fed, but think it would make very poor, thin milk, and would sour quickly.	Not any; cause, the patrons are very careful in taking care of milk.
Alexander	Grass and sowed corn, some grain.	"	If fed, think it would cause floating curds, also injure the flavor and break the grain of the cheese.	Have had some; cause, not properly stirring and aerating the milk while cooling, also negligence of the patrons in not properly cleaning their cans.
North Star.....	Grass and corn fodder.	"	Think it would make very poor milk, and cause the cheese to sour and spoil quickly.	Not any to speak of; cause, our patrons are very particular to stir and cool their milk before covering it over at night.
P. Warner.....	Grass.	"	It would cause the cheese to puff and sour.	None.
The Swiss.....	Grass, sugar meal, mill feed.	None.	Think it would make a very poor milk, that would yield very little butter fat.	None.
Cloverfield Creamery.....	Grass and corn fodder.	"	If fed, think it would cause floating curds, and would injure the texture and flavor of the cheese, causing the cheese to puff up and sour.	Had very little; cause, not taking proper care of the milk in cooling, etc.
Excelsior, No. 1				Have some; cause, the patrons not taking proper care of their milk in stirring, and by putting the cover on the cans before the milk is cooled, thus retaining the animal heat, also by weeds eaten by the cattle, etc.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — GENESSEE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Cold Spring Creamery	There is a difference in the cream gathered from the different patrons. think the to ..	Good.....	Good.....	Good.....	.....
Byron	"	"	"
Excelsior, No. 8.....	"	On high ground.	" .....	.....
Excelsior, No. 2.....	"	Good.....	" .....	.....
Alexander	"	"	"
North Star	"	"	"
P. Warner.....	"	"	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — GREENE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
P. Warner.....	Don't think there is any difference in the milk.	Good.....	Good.....	Good.....	making the cheese as to start
The Swiss, .. Cloverfield Creamery	No difference. In making tests of the different patrons' milk I do find some difference, but do not know of any way in which it can be paid for according to its value, as we buy all our milk and would like to find some such method.	Poor..... Good.....	"" ""	"" ""	by hand.
Excelsior, No. 1.....	I do find a difference in the patrons' milk by testing with the lactometer and cream gauge, but do not know of any way in which it could be equalized or paid for according to its value.	""	""	""	a less price on that account; the cheese made previous to the feeding of the sugar-meal was all right."

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- HERKIMER COUNTY -- (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Frankfort.....	Frankfort.....	June 20	Cheese.....	6	26	280	7,561	...	...	...	...
East Schuyler.....	Schuyler.....	31	"	9	29	420	9,800	...	...	...	...
Blaser.....	Litchfield.....	22	"	9	32	400	9,800	...	...	...	...
Norton.....	Litchfield.....	23	"	9	25	420	9,800	...	...	...	...
Cullen.....	Warren.....	27	"	8	25	400	5,000	...	...	...	...
Henderson Association.....	Warren.....	28	"	7	11	325	11,000	...	...	...	...
Orains Corners.....	Warren.....	29	"	7	20	350	4,048	...	...	...	...
Hinckley.....	Russell.....	7	"	7 1/2	15	260	7,000	...	...	...	...
Eagle.....	Herkimer.....	11	"	7 1/2	25	500	11,000	...	...	...	...
Barlett, R.....	Winfield.....	12	"	8	32	...	12,608	...	...	...	...
Russell.....	Russell.....	15	"	6	8	125	2,700	...	...	...	...
Delavan.....	Russell.....	17	"	6	8	170	3,500	...	...	...	...
Davis.....	Frankfort.....	26	"	6	28	425	10,200	...	...	...	...
German Flats.....	Schuyler.....	27	"	6	30	677	18,004	...	...	...	...
.....	Schuyler.....	28	"	6	40	600	15,400	...	...	...	...
.....	Manheim.....	31	"	9	10	344	9,000	...	...	...	...
.....	Columbia.....	31	"	6	24	400	10,200	...	...	...	...
.....	Stark.....	1	"	6	12	300	6,645	...	...	...	...
.....	Danube.....	1	"	6	13	375	7,500	...	...	...	...
.....	Fairfield.....	1	"	9	7	305	6,287	...	...	...	...
.....	Danube.....	2	"	6	16	335	6,000	...	...	...	...
.....	Manheim.....	2	"	7	3	95	2,014	...	...	...	...
.....	Manheim.....	2	"	6	4	180	3,500	...	...	...	...
.....	Warren.....	2	"	6	20	350	8,345	...	...	...	...
.....	Columbia.....	3	"	6	13	190	4,183	...	...	...	...
.....	Danube.....	3	"	7	31	800	16,000	...	...	...	...
.....	Manheim.....	3	"	6	4	169	4,000	...	...	...	...
.....	Litchfield.....	4	"	6	25	422	11,150	...	...	...	...
.....	Stark.....	4	"	7	14	250	5,720	...	...	...	...
.....	Sallsbury.....	4	"	6	23	400	10,000	...	...	...	...
.....	German Flats.....	4	"	7	19	343	7,500	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- HERKIMER COUNTY -- (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Bart's Hill	Fairfield	August 4	Cheese	7	10	400	9,000	.....	.....	.....	.....
Middleville	Herkimer	August 6	"	7	17	500	12,000	.....	.....	.....	.....
Fairfield, Centennial Branch	Fairfield	7	"	7½	10	225	4,500	.....	.....	.....	.....
Fairfield, Centennial Branch	Fairfield	7	"	7	12	625	13,000	.....	.....	.....	.....
Countrymen	Herkimer	8	"	7	17	500	14,000	.....	.....	.....	.....
.....	Stark	6	"	7	20	840	8,200	.....	.....	.....	.....
.....	Fairfield	9	"	7	8	200	4,800	.....	.....	.....	.....
.....	Newport	9	"	7	25	660	10,000	.....	.....	.....	.....
.....	Danube	9	"	7	15	333	7,500	.....	.....	.....	.....
.....	Little Falls	10	"	7	4	184	3,800	.....	.....	.....	.....
.....	Stark	10	"	7	29	610	.....	.....	.....	.....	.....
.....	Little Falls	10	"	8	20	700	13,000	.....	.....	.....	.....
.....	Herkimer	11	"	8	16	375	7,000	.....	.....	.....	.....
.....	Fairfield	11	"	8½	6	200	3,500	.....	.....	.....	.....
.....	Manheim	14	"	8	4	175	4,000	.....	.....	.....	.....
.....	Manheim	14	"	8	9	265	4,000	.....	.....	.....	.....
.....	Fairfield	16	"	7½	16	750	13,400	.....	.....	.....	.....
.....	Fairfield	16	"	8	16	800	11,500	.....	.....	.....	.....
.....	Manheim	17	"	8½	18	480	8,000	.....	.....	.....	.....
.....	Manheim	18	"	8	8	250	5,000	.....	.....	.....	.....
.....	Salisbury	21	"	7	9	260	8,500	.....	.....	.....	.....
.....	Herkimer	22	"	7	18	400	8,000	.....	.....	.....	.....
.....	Little Falls	23	"	7	2	75	1,400	.....	.....	.....	.....
.....	Manheim	23	"	7	9	315	5,000	.....	.....	.....	.....
.....	Manheim	24	"	8	9	244	4,500	.....	.....	.....	.....
.....	Columbia	24	"	8	23	330	6,500	.....	.....	.....	.....
.....	Manheim	24	"	7	12	184	3,000	.....	.....	.....	.....
.....	Manheim	24	"	7	9	200	3,000	.....	.....	.....	.....
.....	German Flats	26	"	7	23	500	18,000	.....	.....	.....	.....
.....	Norway	27	"	8	27	650	11,000	.....	.....	.....	.....
.....	Columbia	28	(Cheese) home trade	8	20	290	6,170	.....	.....	.....	.....

No.	Locality	Sept.	Oct.	Butter and cheese.	7	16	848	5,000	80	15,000	100	21
28	Newport	.....	.....	Butter and cheese.	.....	16	848	5,000	.....	.....	.....	.....
29	Columbia	.....	.....	Cheese	.....	16	240	5,100	.....	.....	.....	.....
30	West Schuyler	.....	.....	"	.....	12	300	3,300	.....	.....	.....	.....
30	Norway	.....	.....	"	.....	24	300	10,000	.....	.....	.....	.....
30	Warren	.....	.....	"	.....	20	300	6,400	.....	.....	.....	.....
31	Norway	.....	.....	"	.....	9	600	9,000	.....	.....	.....	.....
31	Norway Association	.....	.....	Butter and cheese	.....	16	400	6,000	.....	.....	.....	.....
1	Newport	.....	.....	"	.....	16	400	6,000	.....	.....	.....	.....
3	Salisbury	.....	.....	Cheese	.....	16	325	6,900	.....	.....	.....	.....
4	Newport	.....	.....	"	.....	7 1/2	325	6,500	.....	.....	.....	.....
5	Russia	.....	.....	"	.....	8	500	9,000	.....	.....	.....	.....
6	Russia	.....	.....	"	.....	7 1/2	400	8,000	.....	.....	.....	.....
6	Norway	.....	.....	"	.....	26	243	4,000	.....	.....	.....	.....
7	Norway	.....	.....	"	.....	26	243	4,000	.....	.....	.....	.....
7	Russia	.....	.....	"	.....	8	200	2,000	.....	.....	.....	.....
8	Russia	.....	.....	"	.....	8	160	2,500	.....	.....	.....	.....
10	Herkimer	.....	.....	"	.....	14	300	3,900	.....	.....	.....	.....
11	Newport	.....	.....	Butter and cheese	.....	17	425	6,500	.....	.....	.....	.....
12	Russia	.....	.....	"	.....	28	260	6,000	.....	.....	.....	.....
13	Salisbury	.....	.....	Cheese	.....	31	400	6,000	.....	.....	.....	.....
13	Herkimer	.....	.....	"	.....	17	275	6,400	.....	.....	.....	.....
14	Litchfield	.....	.....	"	.....	26	375	10,200	.....	.....	.....	.....
14	Russia	.....	.....	"	.....	16	340	6,000	.....	.....	.....	.....
14	Litchfield	.....	.....	"	.....	43	650	17,300	.....	.....	.....	.....
14	Russia	.....	.....	"	.....	8	200	2,000	.....	.....	.....	.....
15	Russia	.....	.....	"	.....	8	200	2,500	.....	.....	.....	.....
18	Frankfort	.....	.....	"	.....	29	335	8,006	.....	.....	.....	.....
19	Litchfield	.....	.....	"	.....	23	350	9,000	.....	.....	.....	.....
20	Paris	.....	.....	"	.....	29	300	8,000	.....	.....	.....	.....
20	Ohio	.....	.....	"	.....	23	300	4,000	.....	.....	.....	.....
21	Winfield	.....	.....	"	.....	22	300	8,750	.....	.....	.....	.....
22	Columbia	.....	.....	"	.....	23	280	6,500	.....	.....	.....	.....
26	Litchfield	.....	.....	"	.....	19	325	8,700	.....	.....	.....	.....
29	Winfield	.....	.....	"	.....	43	650	16,500	.....	.....	.....	.....
2	Warren	.....	.....	"	.....	11	275	6,850	.....	.....	.....	.....
3	German Flats	.....	.....	"	.....	20	650	12,850	.....	.....	.....	.....
4	German Flats	.....	.....	"	.....	19	400	9,800	.....	.....	.....	.....
5	Windfield	.....	.....	"	.....	14	300	7,300	.....	.....	.....	.....
6	Windfield	.....	.....	"	.....	13	275	7,300	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—HERKIMER COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Frankfort.....	Full cream	60	12	100,000	10.27	.....	Yes ..	.....
East Schuyler.....	Full cream	50	20	135,000	9	.....	" ..	.....
Blaster	Full cream	65	14	140,000	10	.....	" ..	.....
Norton	Full cream	62	15	145,000	10.20	.....	" ..	.....
Cullen	Shipping	65	9	115,000	10.50	*	" ..	Common.
Henderson Association..	Shipping	65	3	97,631	10.50	.....	" ..	Common.
Cruin's Corners.....	Shipping	50	8	105,600	10.61	.....	" ..	Common.
Hinckley	Full cream	40	16	87,000	10.21	.....	" ..	Native.
Eagle.....	Shipping	60	17	260,100	10.50	†	" ..	Native.
Bartlett R.....	Shipping	60	20	240,000	10.18	.....	" ..	Native and Holsteins.
Russia.....	Full cream	55	5	40,000	10	.....	No.....	Native.
Delavan.....	Full cream	37	10	65,000	10	.....	Yes ..	Natives and Jerseys.
Davis	Full cream	38	26	155,000	10	.....	" ..	Natives and Jerseys.
Short Lots	Full cream	38	43	240,000	10	.....	" ..	Natives.
West Schuyler.....	Full cream	48	31	172,000	9.90	.....	" ..	Natives and Holsteins.
Little Falls.....	Full cream	62	14	125,000	10	9	" ..	Natives.
Columbia Centre	Full cream	65	18	140,000	10.28	.....	No.....	Natives and Holsteins.
Vedder	Full cream	62	11	100,000	10.60	.....	Yes ..	Native.
Hickory Grove.....	Shipping	62	12	100,000	10.30	10½	" ..	Ayrshire.
Keller	Full cream	55	12	120,000	10.50	9½	" ..	Native.
Crystal Spring.....	Hometrade and ship'g	65	10	111,325	10.06	10.24	.....	Holsteins.
Brockel and Carley.....	Full cream	48	4	32,000	.....	.....	" ..	.....
Cook, J. J. & Co.....	Full cream	45	6	50,000	10	9	" ..	Natives and Holsteins.
Crain's Corners.....	Full cream	50	16	115,000	10.61	.....	Yes ..	Natives.
Grant, M. J.....	Full cream	45	9	60,000	10.02	.....	No.....	Natives.
Newville Association.....	Shipping..	61	25	250,000	10	9	" ..	Natives.
Picket, J.....	Full cream	50	8	65,000	.....	.....	Yes ..	Natives.
North Winfield, No. 2.....	Full cream	61	17	145,000	10.60	.....	No.....	Native.
Oramer's Corners	Shipping	61	9	70,000	10	9	" ..	Native.
Cook Ives Company.....	Full cream.....	50	20	150,000	10	.....	.....	.....

*One-quarter to one-half ruling price.

† One-half above ruling of Little Falls market.

Fulmer Creek	Shipping	64	7	10,000	10.53	.....	Yes....	Native and Holstein.
Bart's Hill	Full cream	60	15	150,000	10	9	No....	Native and Holstein.
Middleville	Full cream	62	15	216,000	10	9	Yes....	Natives.
Fairfield, C't'n'nial Br'ch	Full cream	60	9	90,000	10	9	No....	Natives.
Fairfield, C't'n'nial Br'ch	Full cream	60	21	200,000	10	9	Yes....	.....
Countryman	Full cream	75	15	200,000	10	9	"	Natives.
Galusha, S. J.	Shipping	64	13	90,000	10.33	.....	"	Natives and grades.
Fenier	Full cream	50	6	60,000	10	8½	"	Native.
Hassenclever	Full cream	70	13	220,000	10	9	No....	Native.
Elm Grove	Shipping	64	13	100,000	10.21	.....	Yes....	Native.
Bert Grove	Full cream	53	6	60,000	10	8½	.....	Native.
Van Hornesville	Shipping	67	.....	150,000	10.50	.....	No....	Native.
Eatonville	Full cream	53	20	24,000	10	9	.....	Native.
Rhell's Bush	Full cream	58	12	125,000	10½	9	Yes....	Natives and Holstein.
Fairfield Cold Spring ..	Full cream	60	6	50,000	10	8½	No....	Native.
Manheim	Full cream	60	7	82,000	10	8	.....	Native.
Manheim Centre	Full cream	60	7	90,000	10	9	.....	Native.
Old Fairfield	Full cream	65	18	274,000	10	9	Yes....	Native.
Fairfield Dairy Associat'n	Full cream	62	17	214,000	10	9	.....	Native.
Snell Bush	Full cream	60	12	150,000	10½	9	No....	Native and Holstein.
Manheim Turnpike Ass'n	Full cream	62	8	100,000	10½	9	.....	Native.
Old Salisbury	Full cream	62	13	120,000	10	8½	"	Native.
Small's Bush	Full cream	60	11	198,000	10	9	"	Native.
Spring	Full cream	45	4	30,000	10	9	"	Native.
New Manheim	Full cream	62	8	110,000	10½	9	"	Native.
Manheim Cold Spring ..	Full cream	65	7	80,000	10	8½	"	Native.
South Columbia	Shipping	65	11	100,000	10.41	10.51	Yes....	Native.
Wheeler Knapp	Full cream	50	6	60,000	10½	8½	.....	Native.
Manheim State Hill	Full cream	60	6	50,000	10	9	No....	Natives or common.
Denison's Corners	Shipping	65	20	200,000	10.44	.....	.....	.....
White Creek	Full cream	73	14	240,000	10	9	Yes....	Native.
Miller's Mill	Home trade	40	13	80,000	10	.....	.....	Native.
Shed Brook	Night skim	70	8	125,000	10	8½	No....	Native.
"B." No. 2	Home trade	41	12	80,000	10.02	.....	.....	Jerseys.
Sterling Creek	Full cream	40	8	60,000	10½	9	Yes....	Native.
Norway	Full cream	70	20	275,000	10	8½	"	Native.
Dolphin	Home trade	38	16	84,000	10.60	.....	No....	Native.
Norway Association	Full cream	62	11	200,000	10½	8½	.....	Native.
Newport	Quarter skimmed ..	68	9	130,000	10½	8	"	Native.
Cold Creek	Full cream	60	10	100,000	9½	9	.....	Native.
Newport Hill	Full cream	60	10	130,000	10½	9	Yes....	Native.
Poland	Full cream	33	25	180,000	10½	9	"	Native and Holstein.
Wait	Full cream	63	10	110,000	9½	9	"	Natives.
Black Creek	Full cream	46	9	90,000	9½	9	No....	Natives.
Miles Moore	Full cream	44	7	50,000	9.60	8½	Yes....	Natives.
Smith, M. S.	Full cream	38	7	60,000	10	8½	No....	Natives.
Herkimer	Full cream	63	8	100,000	10.68	8½	Yes....	Natives.
Clover Leaf Creamery ..	Skimmed	60	8	125,000	12	4	.....	Natives.
Cold Brook	Skimmed	45	10	75,000	10½	7½	.....	Natives.
Avery & Ives	Full cream	63	9	100,000	9½	8½	No....	Natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Herkimer	Full cream	63	10	90,000	10.60	.....	Yes...	Natives.
North Litchfield	Full cream	62	16	110,000	10.20	.....	No...	Native and Holstein.
Hinkley	Full cream	42	12	90,000	10.25	8½	Yes...	Native.
Cedarville	Colored; full cream ..	65	27	270,000	10.19	.....	"	Native and grades.
Russla	Full cream	44	3	40,000	10½	8	"	Native.
Delavan	Full cream	37	6	65,000	10	9	.....	Native.
Whitman, O. W.	Full cream, h'metr'de ..	37	21	110,000	10.21	.....	Yes...	Native.
N'th Winfield Comb., No. 3 ..	Full cream	60	15	140,000	.....	.....	"	Native.
King, A. S.	Full cream	50	13	100,000	10¼	.....	No...	Native.
Ash Creek	Full cream	63	7	80,000	9.95	8½	Yes...	Native.
West Winfield	Full cream	53	14	100,500	10.27	.....	"	Native.
Cedarville Branch	Shipping	62	10	100,000	10.20	.....	Yes...	Mixed.
N'th Winfield Comb., No. 4 ..	Full cream	61	14	120,000	.....	.....	"	Native.
N'th Winfield Comb., No. 1 ..	Full cream	60	28	240,000	10.13	.....	"	Native and grades.
Henderson Association ..	Full cream	65	10	85,000	10	.....	No...	Native.
Rising Star	Full cream	64	20	185,000	10.25	.....	Yes...	Native.
Paine's Hollow	Full cream	60	15	125,000	10.25	.....	"	Native.
Waddell & Eggleston	Full cream, h'metr'de ..	38	20	100,000	.....	.....	"	Native.
Eggleston, No. 1	Full cream	36	19	105,000	.....	.....	"	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Frankfort.....	.....	None.	.....	The cause, patrons not taking proper care of milk.
East Schuyler.....	.....	.....	None to my knowledge.	Yes, had some; cause, lack of care by the patrons.
Blasier.....	.....	.....	None.	Have had some; cause, lack of care by patrons.
Norton.....	.....	.....	None.	Have had some; cause, lack of care by patrons.
Cullen.....	Grass, hay and ground feed.	.....	None.	Have had some; cause, lack of care by patrons.
Henderson Association.....	.....	.....	None.	Have had some; cause, lack of care by patrons.
Crains Corners.....	.....	.....	None.	Have had some; cause, lack of care by patrons.
Hinckley.....	.....	.....	None.	Have had some; cause, lack of care by patrons.
Eagle.....	Grass, hay and ground feed.	Do not	.....	Have had some; cause, lack of care by patrons.
Bartlett, B.....	Hay, grain and ground feed.	Yes.	It taints the milk.	Have had some; cause, lack of care by patrons.
Russia.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Delavan.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Davis.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Short Lots.....	Some sugar meal.	.....	.....	Have had some; cause, lack of care by patrons.
West Schuyler.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Little Falls.....	Hay and wheat bran	.....	.....	Have had some; cause, lack of care by patrons.
Columbia Centre ..	.....	.....	.....	Have had some; cause, lack of care by patrons.
Vedder.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Hickory Grove.....	Hay, grass and gr'n.	.....	.....	Have had some; cause, lack of care by patrons.
Keller.....	Hay, meal and bran.	.....	.....	Have had some; cause, lack of care by patrons.
Crystal Spring.....	Grass, hay and gr'n.	.....	.....	Have had some; cause, lack of care by patrons.
Brockel and Carley.....	.....	.....	.....	Have had some; cause, lack of care by patrons.
Cook, J. J. & Co.....	.....	.....	.....	Have had some; cause, lack of care by patrons.

* Some do; it affects the quality of the milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With reward to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Grains Corners.....	.....	None.	.....	Cause do not know.
Grant, M. J.....	.....	"	.....	Have had; cause do not know.
Newville Association.....	.....	"	.....	Have had; cause, improper care of milk by patrons.
Picket, J.....	Grass and hay.	None.	.....	Cause not known.
North Winfield, No. 3.....	.....	Some do.	.....	Have had; different causes.
Cramer's Corners.....	Grass, hay and ground feed.	None.	.....	Have had; cause, bad water for cows and not working the milk rightly.
Cook Ives Company.....	Grass, hay and meal.	"	.....	Yes; think by milk not having proper care.
Fulmer Creek.....	Grass, hay and ground feed.	"	It increases the flow and makes it lighter in quality.	Cause, not properly cooling, and uncleanness of pails and strainers; bad water and sour grass.
Barts Hill.....	Grass and hay.	"	Makes it thin.	Cause, old cans not properly cared for.
Middleville.....	Grass, hay and meal.	"	Think the cheese will get sweaty from milk where it is fed.	Cause, improper care of milk, and bad water.
Fairfield, Centennial Br'ch.....	Grass, hay and meal.	"	Taints it.	Cause, the kind of herbs the cows eat; do not think there is any difference if the milk is made up into cheese.
Fairfield, Centennial Br'ch.....	Grass, hay and meal.	"	Taints it.	Cause, not known.
Countryman.....	Grass and hay.	"	Would give it a bad flavor.	Cause, not properly cooled and bad water.
Galusha, S. J.....	Hay and grass.	"	of lighter milk, and	Cause, negligence.
Penier.....	Hay and grass.	"	the cheese.	Cause, milk near the manure pile.
Hessenclever.....	Hay and grass.	"	.....	Cause, on account of the weather.
Elm Grove.....	Hay and grass.	"	.....	Have had, during hot weather; cause, improper care of milk, bad water and dead carcass in the pasture.
Bert Grove.....	Hay, grass and meal.	"	Makes it smell and taste badly; badly-flavored cheese.	Cause, not known.
Van Hornesville.....	Clover and timothy grass.	"	Cause difficult to tell.	No material difference.

Eatonville.....	Grass, hay, meal and shorts.	"	Would make a bad and sour cheese.	Cause, bad weather and bad water.
Shell's Bush.....	Grass, hay and grain.	"	Would make it thin.	Cause, cows drinking bad water.
Fairfield Cold Spring	Grass and hay.	"	Does not think it would hurt the milk.	Cause, hot weather and hoof rot.
Manheim	Grass and hay.	"	Makes it thin.	Cause, not known.
Manheim Centre.....	Grass and hay.	"	Taints the milk.	Cause, not known.
Old Fairfield.....	Grass and hay.	"	It produces a soggy griddle cheese, and apt to work off in a bad flavor.	Cause, animal heat and not being taken care of.
Fairfield Dairy Association.	Grass and hay.	"	Gives the milk a bad smell.	Cause, improper care of milk.
Snell Bush	Grass and hay.	"	Taints the milk.	Cause, hot weather, poor water, improper care of milk.
Manheim Turnpike Ass'n.	Grass and hay.	"	Makes the milk bad.	Have had; cause, bad water.
Old Salisbury.....	Grass and hay.	"	Makes it thin.	Have had; cause, something the cows eat.
Small's Bush	Grass and hay.	"	Spoils the flavor of cheese.	Have had; cause, water and feed.
Spring	Grass and hay.	"	Taints the milk.	Have had; cause, bad water.
New Manheim.....	Grass and hay.	"	It taints it.	Have had; cause, bad water.
Manheim Cold Spring	Grass and hay.	"	Gives cheese sweet flavor.	Have had; cause, dry weather, water get- ting low.
South Columbia.....	Hay, grass and ground feed.	"	.....	Have had; cause, improper care of milk.
Wheeler Knapp	Grass and hay, meal	None.	Do not think it would do the milk any good.	No; think it is a weed the cows eat.
Manheim State Hill.....	Grass and hay.	"	Would taint the milk.	Yes; cause, dry weather.
Denison's Corners	Grass, hay and meal	None.	Increases the flow but spoils the flavor.	Have had; cause, milk not properly cooled.
White Creek	Ground feed.	"	It affects, the aver- age an	Have had; cause, improper care of milk and not cooling it.
Miller's Mill	Grass and hay.	"	Would be sour.	Have had; cause, not stirring the milk.
Shed Brook	Shorts and corn meal.	A few.	It takes more milk for a pound of cheese, and does not make a fine cheese.	Have had; cause, improper care of
"B." No. 2	Grass and hay.	None.	Can not tell.	
Sterling Creek	Grass and hay.	"	Sours the milk.	
Norway	Hay, grass and ground feed.	"	.....
Dolphin	Grass, hay and meal	"	Hurts the cheese; especially in hot weather.	Have not,
Norway Association	Grass and hay, meal	"	Would have a tendency to sour the cheese.	Have
Newport	Grass, hay and meal	"	Think would affect the flavor of cheese	Have
Cold Creek.....	Grass, hay and meal	.....	Can not see that it affects the milk in any way.	think.
Newport Hill	Grass and hay.	.....	Do not think it affects the milk or cheese.	Have had; cause, think the cows eat weeds in pasture.
Poland .....		.....		Have had; cause, hot weather and old cans; cows drinking out of mud holes.

* Not allowed.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Walt	Grass, hay and meal	.....	.....	Do not know.
Black Creek	Grass and hay.	.....	Would spoil the flavor of the milk.	Have had; cause, think the cows eat and drink out of mud holes.
Miles Moore	Grass and hay.	.....	Does not; think it affects the milk.	Have had; cause, think the animal heat is not taken out before it is brought to the factory.
Smith, M. S.	Grass and hay.	None.	Spills the flavor of the cheese.	Have had; cause, the animal heat out before it is brought to the factory.
Herkimer	Grass, hay and meal	"	Do not know.	Do not know and ;
Clover Leaf Creamery	Grass, hay and meal	"	Spills the flavor of cheese.	Have had; cause, I
Cold Brook	Grass, hay and meal	"	Makes milk gassy.	Have had; cause,
Avery & Ives	Grass, hay and meal	"	Think would spoil the cheese.	Have had; cause
Herkimer	Pasture.	"	.....	milk near barn.
North Litchfield	Pasture and grain.	"	.....	Have had; cause, lack of care.
Hinkley	Grass and hay.	None.	Effect.	Have had; cause, lack of care.
Cedarville	Pasture and grain.	Yes...	Whey is properly	Have had; cause, not known.
Russala	Grass and hay.	Some.	.....	Very little.
Delavan	Grass and hay.	None.	.....
Whitman, C. W.	Grass and grain.	Few..	.....	of milk.
North Whitfield Comb., No. 3	Pasture and grain.	Yes...	Do not see any serious effect.	of milk.
Kings, A. S.	Pasture and grain.	Yes...	Do not see any ill effect.	milk stand
Ash Creek	Grass and hay.	None.	Tendency to a bitter taste.	a part of
West Winfield	Pasture and grain.	"	.....	patron.
Cedarville Branch	Grass and hay.	Yes...	Not unfavorable, except in warm weather.	Have had; cause, improper care of milk by patron.
North Winfield Comb., No. 4	Pasture and grain.	None.	.....	Have had; cause, lack of care and poor water.
			.....	Have had; cause, poor water, improper food, stables and pastures.
			.....	Have had a little; cause, something the cattle eat and lack of care.

North Winfield Comb., No. 1.	Pasture and grain.	Do.	Does not affect the milk, as it is fed with grain. Would produce tainted milk if fed to excess.	Have had; cause, lack of care on the part of patrons. Have had; cause, poor water and poor feed. Have had; cause, lack of care by the patrons. Have had; cause, lack of care. Have had; cause, lack of care by patrons. Have had; cause, poor feed.
Henderson Association.....	Pasture and grain.	Little	.....
Rising star	Pasture and grain.	None.	.....
Paines Hollow.....	Pasture and grain.	"	.....
Waddell & Eggleston	Pasture and grain.	"	.....
Eggleston, No. 1.....	Pasture and grain.	"	.....

* Do not think they do. † Not much.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Frankfort.....	.....	Fair.....	Heel path, side of Erie canal.	Fair.....	At this factory they are now making a good product.
East Schuyler.....	.....	Good.....	Good.....	Good.....	Had some trouble; all right now.
Blasier.....	Does not know of any.	New, not finished.	Town of Litchfield; surround-	"	.....
Norton.....	Does not know of any difference.	Fair.....	inga good.	"	.....
Cullen.....	.....	Old build-	Town of Litchfield.	"	.....
	.....	ing, in fair	Good.....	.....	An inspection of all the milk delivered at this factory showed it to be a good quality.
Henderson Association.....	.....	repair, apparatus in good condition.	"	Not very good.	.....
	.....	Good.....	.....	.....	.....
Craigs Corners.....	.....	"	"	Good.....	.....
Hinckley.....	Does not know of any.	"	"	"	.....

Eagle.....		"	"	"	First-class.	The inspection at this factory elaborated to any degree per cent.
Bartlett, E.....		"	"	Good, and convenient to railroad.	Very poor..	7.
Russala.....	Not of any account	Very good.		Russala Cor- ners.	Good.....	Makes a small home-trade cheese.
Delavan	None to speak of.	Not very good.		Good.....	"	Makes a small home-trade cheese.
Davis.....	Do not know that there is.	Good.....		"	"	
Short Lots	Do not think there is.	"		Good dairy country.	"	
West Schuyler.....	Did not know of any.	Not very good.		Good.....	Fair.....	
Little Falls.	There is a difference; do not know how to adjust it.	Good.....		"	Good.....	
Columbia Centre	Do not know of any.	Fair.....		"	Fair.....	The milk worked slowly, did not seem to be ripe enough; the maker likes the mode of mak- ing very much; had a better one, had been hav- ing he would try and
Vedder	Do not know of any.	Poor.....		"	Good.....	
Hickory Grove.....		Good.....		"	"	A
Keller.....	Do not know how it can be adjusted.	"		"	"	w. e. inspection made at this factory, good quality milk; had some trouble with tainted milk.
Crystal Spring.....		Fair		"	Bad	
Brookel and Carley	There is a difference; do not know how to adjust it.	Good.....		"	Good.....	
Cook J. I. & Co.	There is a difference; do not know how to adjust it.	"		"	"	
Oraine Corners	Do not know of any difference.	"		"	Fair.....	The maker at this factory likes the system and thinks he will follow it

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Grant, M. J. Newville Association	I think there is; do not know how to equalize it.	Good..... "	Fair..... Good.....	Not very good. Good.....	..... In
Picket, J. North Windfield, No. 2.....	Don't know how it can be adjusted. Don't know how to equalize it.	"	"	"	
Cramer's Corners .....	.....	Fair	Good.....	"	


Cook Ives Company.....	The difference would be so small that would not be worth while to adjust.	Good.....	".....	".....	".....
Palmer Creek.....		"	On Fullmer creek.	Fair.....	Few samples at this factory tainted by not properly cooling nights milk. There has been some seri- ous loss through rejected cheese, the maker saying it was un- doubtedly due to the method employed in cooling the nights milk.
Bart's Hill	Do not think there is any. There is a difference, but don't know how it can be adjusted.	"	Good.....	Good.....	
Middleville		"	"	"	
Fairfield, Centennial Br'ch	Do not know of any difference, or how it could [there was.	"	"	"	
Fairfield, Centennial Br'ch	Do not [there was. could [there was.	Good.....	Good.....	Good.....	
Countryman	There is [there was. adjust it.	"	"	"	
Galusha, S. J		Good.....	Near vil- lage of Starkville	Rather poor	Inspection made and certificate given to each patron, also in- struction in testing and appli- cation in force method.
Fenner.....	There is no difference, I think.	"	Good.....	Good.....	
Hassenclever	There is a difference; do not know how to adjust it.	"	"	"	
Elm Grove		"	Three mil's from Stark- ville.	Ordinary ..	right were milk iron, milk, and the
Bert Grove.....	There is a difference; do not know how to adjust it.	"	Good.....	Good.....	
Van Hornesville.....		"	Fine.....	"	
Eatonville.....	making butter; do making cheese, do be adjusted.	"	Good.....	"	
Shell's Bush		"	"	"	
Fairfield Cold Spring.....	any difference in be in making butter.	"	Good.....	Good.....	
Manhelm	how it could be	"	"	"	
Manhelm Centre.....		"	"	"	
Old Fairfield	There is a difference; don't know how to adjust it.	"	"	"	
Fairfield Dairy Association	There is a difference; don't know how to adjust it.	"	"	"	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — HERKIMER COUNTY — (Continued).

Location	Remarks	Good	Good	Good	Good
Snell Bush	There is a difference; don't know how it could be adjusted.	Good	Good	Good	Good
Manhelm Turnpike Association	Do not know how to adjust it.	"	"	"	"
Old Salisbury	There is a difference; don't know how to adjust it.	"	"	"	"
Small's Bush	Don't think there is any difference.	"	"	"	"
Spring	Do not think there is.	"	"	"	"
New Manhelm	There is; do not know how it can be adjusted.	"	"	"	"
Manhelm Cold Spring	Not any difference.	"	"	"	"
South Columbia		"	S. Columbia	"	"
Wheeler Knapp	Yes; but do not know how it could be adjusted.	Good	Good	Good	Good
Manhelm State Hill	Do not think there is any difference.	"	"	"	"
Denison's Corners		"	"	"	"
White Creek	Do not think there is any difference.	"	"	"	"
Miller's Mill		Fair	"	"	"
Shed Brook	Do not think there is any difference, except Jerseys.	Good	"	"	"

"B," No. 3.....	None.	Fair	"	Fair	The milk at this factory was found to be above standard, instructions in testing and taking samples were given.
Sterling Creek	Do not think there is any difference.	"	"	"	"
Norway	Do not think there is any difference, except Jerseys.	Good	"	Good	"
Dolphin .....	.....	Fair	Unfavorable.	Poor	At this factory all are allowed to full of cream nights' milk for coffee, which, I have been the rule for years, but a standard cup will be adopted at the next meeting of the patrons.
Norway Association	Do not think there is much difference.	"	Good	Good	"
Newport	Do not think there is any difference.	Good	"	"	"
Cold Creek	Do not know how it could be adjusted.	"	"	"	"
Newport Hill	There is a difference, do not know how it could be adjusted.	"	"	"	"
Poland	Do not think there is any difference.	"	"	"	"
Walt	Do not think there is any difference.	"	"	"	"
Black Creek	Do not think there is any difference.	Fair	"	"	"
Miles Moore	There is no difference.	Good	"	"	"
Smith, M. S.	Thinks there is a difference, but do not know how to adjust it.	Poor	"	Poor	"
Herkimer	There is, but do not know how it could be adjusted.	Good	"	Good	"
Clover Leaf Creamery .....	.....	" .....	" .....	" .....	" .....
Cold Brook .....	.....	" .....	" .....	" .....	" .....
Avery & Ives .....	.....	" .....	" .....	" .....	" .....
Herkimer .....	.....	Fair	"	Fair	"
North Litchfield .....	.....	First class.	"	Good	"
Hinkley .....	.....	Good	"	"	"
Cedarville .....	.....	First-class.	"	"	"
Russia .....	.....	.....	" .....	.....	" .....
Delavan .....	.....	Fair	Good	Good	"
Whitman, C. W. ....	.....	Very poor.	"	Poor	"
North Winfield Comb. No. 3 .....	.....	Fair	"	Good	"
Kings, A. S. ....	.....	First-class.	"	"	"
Ash Creek .....	.....	Good	"	"	"
West Winfield .....	.....	" .....	" .....	First-class.	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888--HERKIMER COUNTY--(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Cedarville Branch.....	t, except with expense, and price received	Good.....	No. 1	Good.....	.....
	Do not know of any difference.	First-class.	Good.....	First-class.	.....
	There is; no way to adjust it.	Good.....	"	Good .....	.....
	There is; don't know how to adjust it.	" .....	" .....	" .....	.....
	Do not know of any.	" .....	" .....	" .....	.....
	Do not know of any.	" .....	" .....	" .....	.....
	There is; don't know any way to adjust it.	"	"	Fair.....	.....
	I do not know of any.	"	"	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- JEFFERSON COUNTY -- (Continued).

NAME-OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Adams	Adams	July 19	Cheese	7	45	600	12,000	85	.....	.....	.....
West Rodman	Rodman	July 20	Butter and cheese	6	35	425	7,689	85	.....	90%	18%
Cascade	Rutland	July 21	Cheese	6	28	540	10,000	.....	.....	.....	.....
Ayers	Watertown	July 26	.....	6	36	618	13,000	.....	.....	.....	.....
Fassett M. A., Creamery	Rodman	Aug. 8	Butter	6 1/2	17	340	4,808	204	38,859	23.51	21.10
East Rodman	Rodman	Aug. 7	Cheese	6	24	350	5,600	.....	.....	.....	.....
Brownville	Brownville	Aug. 8	.....	6	21	350	6,400	.....	.....	.....	.....
Smith, B. P.	Rutland	Aug. 9	.....	6	13	200	4,861	.....	.....	.....	.....
Grow Bros.	Lorraine	Aug. 9	.....	6	30	350	5,494	.....	.....	.....	.....
Hodsell & More	Champion	Aug. 10	.....	6	26	400	7,891	.....	.....	.....	.....
Williams, E. J., No. 2	Rutland	Aug. 11	.....	6	18	440	9,000	.....	.....	.....	.....
Debois Corners	Wilna	Aug. 13	.....	6	25	400	8,500	.....	.....	.....	.....
Champion Village	Champion	Aug. 15	.....	6	27	400	5,000	.....	.....	.....	.....
Philadelphia	Philadelphia	Aug. 18	.....	6	31	525	11,478	.....	.....	.....	.....
Evans' Mills .....	.....	Aug. 19	.....	6	26	450	11,500	.....	.....	.....	.....
South Champion Creamery	Rutland	Aug. 20	Butter	6	22	350	4,356	190	43,750	24	24
Brookside	Rodman	Aug. 25	Cheese	6	17	400	7,000	.....	.....	.....	.....
South Rodman	Rodman	Aug. 27	.....	6	24	325	6,300	.....	.....	.....	.....
Miller, A.	Rodman	Aug. 28	.....	6	25	345	6,800	.....	.....	.....	.....
Bullock	Worth	Aug. 29	.....	6	14	250	4,900	.....	.....	.....	.....
Great Bend	Champion	Aug. 29	.....	4	8	150	1,800	.....	.....	.....	.....
Babcock	Champion	Aug. 30	.....	5	16	247	3,500	.....	.....	.....	.....
Parkinson	Rutland	Aug. 30	.....	6	16	270	6,100	.....	.....	.....	.....
Trout Brook	Champion	Aug. 31	.....	6	8	175	3,000	.....	.....	.....	.....
Readsville	Wilna	Aug. 31	.....	6	20	190	4,500	.....	.....	.....	.....
French	Leroy	Sept. 4	.....	12	100	1,300	20,000	.....	.....	.....	.....
Union Crogan	Crogran	Sept. 4	.....	6	36	620	13,230	.....	.....	.....	.....
Star	Antwerp	Sept. 5	.....	6	22	400	8,800	.....	.....	.....	.....
Sterling, No. 1	Antwerp	Sept. 6	.....	5	14	300	75,000	.....	.....	.....	.....
Hall's Corners	Antwerp	Sept. 7	.....	6	24	500	10,600	.....	.....	.....	.....
Parkinson	Butland	Sept. 19	.....	6	16	270	4,500	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — JEFFERSON COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
French	Sandsford Corners	Sept. 3	Cheese.....	12	100	1,300	20,000	...	.....	.....	.....
Star	Antwerp	5	"	6	72	400	8,800	...	.....	.....	.....
Sterlin, No. 1	Antwerp	6	"	7	14	300	7,500	...	.....	.....	.....
Hill Side	Antwerp	7	"	6	12	350	6,500	...	.....	.....	.....
Hall's Corners	Antwerp	7	"	6	24	500	10,600	...	.....	.....	.....
Bent, No. 1	Antwerp	14	"	5	20	450	7,134	...	.....	.....	.....
Hill Spring	Orleans.....	Oct. 17	"	7	22	300	4,500	...	.....	.....	.....
Watertown Valley	Watertown	Aug. 30	"	6	21	400	6,000	...	.....	.....	.....
Allen, H. J.	Ellisburgh	Oct. 31	"	6	23	250	5,000	...	.....	.....	.....
Colt Brook	Alexandria.....	Nov. 21	"	6	30	325	6,300	...	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — JEFFERSON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Adams	Shipping	65	19	15,000	.....	.....	Yes ..	Holstein and Durham.
West Rodman	Slightly Cheddar ..	60	12	.....	11	8½	.....	Holstein and Durham.
Cascade	Shipping	60	14	160,000	10.30	.....	Yes ..	Grades and Holstein.
Ayers	Full cream	62	21	.....	10.20	8½	.....	Natives.
Fassett, M. A., Creamery .....	.....	.....	.....	.....	.....	.....	.....	Natives, grades, Holsteins and Jerseys.
East Rodman	Cheddar	60	9	100,000	10	10½	Yes ..	Native.
Brownville	Full cream	62	10	65,000	.....	.....	" ..	Native.
Smith, B. P.	Full cream	65	8	65,000	.....	.....	" ..	Native and Jerseys.
Crow Bros.	Cheddar	60	9	70,000	10	9	" ..	All kinds.
Hodsell & More	Full cream	64	14	90,000	10.29	.....	" ..	Native and grade.
Williams, E. J., No. 2	Full cream	65	14	70,000	.....	.....	" ..	Native.
Debois Corners	Full cream	65	14	100,000	.....	.....	No ..	Native, grades and Holsteins.
Champion Village	Full cream; white ..	50	12	.....	9.90	9	Yes ..	Native.
Philadelphia	Full cream	58	19	140,000	.....	.....	No ..	Native.
Evans' Mills	Full cream	58	.....	120,000	.....	.....	.....	Native.
South Champion Cream'y ..	.....	.....	.....	.....	.....	.....	.....	.....
Brookside	Full cream; white ..	57	12	90,000	.....	.....	Yes ..	Natives and Holsteins.
South Rodman	Full cream; white ..	55	11	84,000	.....	.....	" ..	Natives.
Miller, A.	Full cream; white ..	62	10	72,000	.....	.....	No ..	Natives.
Bullock	Full cream; white ..	56	8	65,000	.....	.....	Yes ..	Natives.
Great Bend	Shipping	58	3	25,000	9.90	8½	.....	All kinds.
Babcock	Shipping	60	5	45,000	10	8½	Yes ..	Natives.
Parkinson	Full cream; white ..	64	10	70,000	.....	.....	No ..	Natives.
Trout Brook	Full cream; white ..	60	5	.....	.....	.....	" ..	Natives.
Readsville	Full cream	65	7	65,000	.....	.....	Yes ..	Natives.
French	Full cream	½-1- } 4½ 32 }	.....	.....	.....	25-38	.....	Natives.
Union Crogan	Full cream; white ..	70	17	135,000	.....	.....	.....	Natives.
Star	Full cream; white ..	60	15	105,000	10	8½	.....	Natives.
Sterling, No. 1	Full cream; white ..	66	12	100,000	10.25	.....	Yes ..	Natives.
Hall's Corners	Full cream; white ..	64	16	134,000	10.65	8½	" ..	Natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — JEFFERSON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand.	
Perkinson.....	Full cream; shipping.	64	8	.....	10.68	3 1/2	Yes ..	Mixed natives.
French	Full cream	32 1/2-4 1/2 }	.....	.....	.....	25 to 38	.....	Mixed natives.
Star	Full cream	60	15	105,000	10.50	8 1/2	.....	Natives.
Sterling, No. 1.....	Full cream; white	66	12	100,000	10.25	8.6	No....	Mixed natives.
Hill Slide	American Stilton	12	40	100,000	9 1/2	10	.....	Mixed stock.
Hall's Corners.....	Full cream; shipping.	64	16	134,000	10.15	8 1/2	Yes ..	Mixed natives.
Bent, No. 1	Full cream; shipping.	61.44	11-12	126,056	10.18	8 1/2	.....	Mixed.
Hill Spring	Cheddar	65	9	.....	9 1/2	.....	Yes ..	.....
Watertown Valley	Cheddar	60	10	.....	10	8 1/2	.....	Common stock.
Allen, H. J	Cheddar	60	8	65,000	10.5	9	" ..	Graded stock.
Colt Brook.....	E cheese.....	62	10	78,976	10	.....	" ..	Natives; Ayrshires.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — JEFFERSON COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the cause of the same.
Adams.....	.....	None.	.....	..... milk
West Rodman.....	.....	None.	Only rarely.	..... and
Cascade.....	Corn, ground feed and bran.	"	.....	milk, barns
Ayers.....	Pasturage.	"	.....	We have; cause, lack of care of milk and cans by patrons.
Fassett, M. A., Creamery...	Grass, fodder, corn, bran and meal.	"	.....	Yes; cause, to a great extent, by shutting up in close cans.
East Rodman.....	Corn.	"	It makes tainted milk and bad, open, porous curds.	Yes; cause, poor feed and negligence on the part of the patrons.
Brownville.....	.....	"	.....	I have; cause, lack of care and other causes
Smith, B. P.....	.....	"	.....	low
Grow Bros.....	Pasture.	"	.....	the
Hodges & More.....	.....	"	.....	.....
Williams, E. J., No. 2.....	.....	"	.....	.....
Debois Corners.....	Pasture and shorts.	"	It makes the milk work fast and gives it a bad odor.	.....
Champion Village.....	.....	"	.....	.....
Philadelphia.....	.....	"	.....	.....
Evans' Mills.....	.....	None.	.....	Very little; I have; cause
South Champion Creamery.....	.....	"	.....	I have had carcasses
Brookside.....	.....	"	.....	got rid of
South Rodman.....	.....	None.	.....	I have; cause
Miller, A.....	.....	"	.....	I have; cause
Bullock.....	Pasture.	None.	.....	urea.
Great Bend.....	Grass and corn.	None.	Makes ruffy, whey curd.	of the
Babcock.....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—JERRESON COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Parkinson .....	.....	None.	.....	I have; cause, lack of care.
Trout Brook .....	.....	"	.....	Not any.
Readsville .....	.....	"	.....	I have; cause, dry season.
French	Pastur'ge and grain.	"	.....	I have; cause, want of care.
Union Crogan	Pastur'ge and grain.	"	.....	I have; cause, lack of care.
Star	Pasturage.	"	.....	I have; cause, lack of care.
Sterling, No. 1	Pasture and bran.	"	Bad flavor.	I have; cause, do not know.
Hall's Corners	Pasture and grain.	"	Bad flavor.	I have; cause, lack of care.
Perkinson	Pasture and bran.	"	Bad flavor and porous cheese.	I have; cause, lack of proper care and not aerating the milk.
French	Pasture and shorts.	"	Bad flavor.	Yes, I have; cause, lack of care by the producer.
Star	Grass and bran.	"	.....	I have; cause, proper care was not taken.
Sterling, No. 1	Pasture and shorts.	"	Produces bad flavor	Yes, I have; cause, do not know.
Hill Side	Hay and pasture.	"	.....	Yes, I have; cause, dry weather, poor feed and water, neglect in keeping cans and pails clean, old stables, and there are several other reasons.
Hall's Corners	Pasture and grain.	"	Bad flavor.	Yes, I have; cause, lack of proper care and poor feed.
Bent, No. 1	Ground oats.	Do ..	Has a tendency to hasten milk, and as the cheese acquires age, there is developed in same oftentimes a bad flavor.	Yes, I have; cause, poor but more often neglecting proper care of taking proper care of.
Hill Spring .....	.....	None.	Porous cheese.	I have; cause, drawing (Not very much; cans dipped.
Watertown Valley	Grass and hay.	"	.....	Yes; cause, I think it is on account of low pasturage and poor water.
Allen, H. J.	Common pasture.	"	It does not make good wholesome milk, consequently the cheese can not be as good.	
Colt Brook	Pasture.	"	In some instances.	I have; cause, neglect to remove animal heat soon after milking, cans standing in tainted atmosphere near stables and carriage.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — JEFFERSON COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Adams.....	.....	Fair.....	In the village of Adams.	Poor.....	.....
West Rodman.....	.....	First-class.	Four miles northeast of Adams Centre.	Good.....	See note at end of county.
Cascade.....	None.....	Fine.....	Good.....	Fair.....	Li
Ayers.....	.....	Good.....	"	Good.....	.....
Fassett, M. A., Creamery	.....	"	"	First-class.	.....
East Rodman.....	.....	"	"	Good.....	.....
Brownville.....	I know of no difference.	Fair.....	"	Fair.....	.....
Smith, B. P.....	I think there is; but don't know of any way to adjust it.	Good.....	"	Very good.	Milk very poor, owing to poor feed.
Grow Bros.....	.....	Poor.....	.....	.....	.....
Rodwell & More.....	I know of no difference.	Good.....	Good.....	Perfect.	.....
Williams, E. J., No. 2.....	Do not know.	.....	.....	Fair.....	At this factory the hints given by the inspector in regard to taking care of cans will be beneficial.
Debols Corners.....	I do not know of any.	.....	.....	.....	.....
Champion Village.....	Do not know.	Good.....	Good.....	Good.....	.....
Philadelphia.....	I do not know of any.	"	First-class.	First-class.	The inspector recommended to the maker to cap his cheese and report the effect of the same.
Evans' Mills.....	.....	.....	.....	Excellent.	.....
South Champion Creamery	.....	.....	.....	.....	.....

Sterling, No. 1.....	I do not know of any difference.	Good.....	At Bishop	Good.....	Fair.....	.....
Hill Side	My dairies run about alike and they all feed alike.	.....	Corrara;	ing co'ty.	Oreek .....	.....
Hall's Corners	Yes.	.....	Good.....	First-class.	Good.....	.....
Bent, No. 1	There is a difference if grain is fed to cows;	.....	Good.....	Good.....	Fine .....	.....
Hill Spring	where cheese is made it is a difficult	.....	Excellent..	.....	Not first-	.....
Watertown Valley	matter to equalize it.	.....	.....	.....	class.	.....
Allen, H. J.....	There is, but do not know how to equalize it.	Fair.....	Fair.....	.....	Poor .....	.....
Colt Brook.....	I have no means of ascertaining the fact only by the lactometer test delivered at this factory.	Good.	Good.....	.....	Good.....	.....

LETTER TO SPENCE, INSPECTOR.

milk to a low degree, although taken to the factory or even when in field, as of decomposing animal matter, the milk appears to be much effect and water seems to effect the milk badly; also, milk may have odors and not its or is filled with the peculiar round gas cells, by drawing off the whey and until it "breaks down" or spreads out, and the holes that were round become ice we had is that the gas cells will not be reformed, but a solid cheese will be

WEST RODMAN, July 20, 1889.

'when mixed with
a breathe offensive
a short time; and
feeding on weeds,
ice and keeping it
nullar form of such

V. WEBSTER HEATH.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LEWIS COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average price received for butter.
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Number of pounds of butter.	
Miller's.....	West Turin.....	Aug. 1	Cheese.....	7	24	575	14,000	.....	.....	.....	.....	.....
Sterling.....	Diana.....	14	"	6	29	350	62,013	.....	.....	.....	.....	.....
Old Harrisburgh.....	Harrisburgh.....	21	"	6	17	425	10,000	.....	.....	.....	.....	.....
Lowville.....	Lowville.....	22	"	6½	23	550	11,300	.....	.....	.....	.....	.....
Cold Spring.....	New Bremen.....	23	"	6	20	400	7,600	.....	.....	.....	.....	.....
Union.....	Pinckney.....	23	"	6	17	262	8,450	.....	.....	.....	.....	.....
Carroll.....	Pinckney.....	23	"	5	25	550	8,000	.....	.....	.....	.....	.....
Standerling.....	Denmark.....	24	"	6	44	575	9,600	.....	.....	.....	.....	.....
Croghan.....	Croghan.....	24	"	5½	17	275	4,700	.....	.....	.....	.....	.....
South Harrisburgh.....	Harrisburgh.....	28	"	6	20	400	8,029	.....	.....	.....	.....	.....
Empire.....	New Bremen.....	29	"	6	18	376	7,000	.....	.....	.....	.....	.....
Gowdy.....	West Martinsb'gh	30	"	6	24	500	12,000	.....	.....	.....	.....	.....
Peterie.....	Turin.....	30	"	6	30	526	12,200	.....	.....	.....	.....	.....
Valley.....	Turin.....	30	"	6	15	280	6,700	.....	.....	.....	.....	.....
Auger, G. S.....	Martinsburgh.....	30	"	6	23	550	11,500	.....	.....	.....	.....	.....
Maple Ridge.....	Martinsburgh.....	30	"	6	31	435	9,450	.....	.....	.....	.....	.....
Houseville.....	Turin.....	30	"	6	35	750	16,500	.....	.....	.....	.....	.....
Sulphur Spring.....	Lowville.....	30	"	6	26	550	12,000	.....	.....	.....	.....	.....
Valley Spring.....	Martinsburgh.....	30	"	6	13	350	7,200	.....	.....	.....	.....	.....
Glendale.....	Martinsburgh.....	30	"	6	30	550	12,000	.....	.....	.....	.....	.....
Williams.....	Martinsburgh.....	30	"	6	16	350	8,000	.....	.....	.....	.....	.....
Meadow Brook.....	Lydon.....	31	"	6	28	500	12,329	.....	.....	.....	.....	.....
Chrestien, T. N.....	Osceola.....	Sept. 5	"	6	35	400	8,200	.....	.....	.....	.....	.....
Sears.....	Cortland.....	18	"	6	19	318	7,800	.....	.....	.....	.....	.....
River Street.....	Harrisburgh.....	18	"	6	17	325	8,500	.....	.....	.....	.....	.....
New Boston.....	Pinckney.....	19	"	6	44	600	7,000	.....	.....	.....	.....	.....
Valley Spring.....	Martinsburgh.....	20	Butter and cheese.....	6	13	325	4,700	15	1,200	28.6	23	.....
E. J. Williams, No. 3.....	Pinckney.....	20	Cheese.....	5	18	200	3,000	.....	.....	.....	.....	.....
Martinsburgh.....	Martinsburgh.....	21	"	6	23	509	8,000	.....	.....	.....	.....	.....
West Martinsburgh.....	Martinsburgh.....	22	"	6	25	500	8,000	.....	.....	.....	.....	.....
Lowville.....	Lowville.....	23	"	6	23	500	8,500	.....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LEWIS COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Miller's.....	Full cream	63	21	225,000	.....	.....	Native.
Sterling	Full cream	65	10	90,000	.....	.....	Native.
Old Harrisburgh	Full cream	57	20	100,000	10	.....	Grass and shorts.
Lowville	Full cream	40	29	150,000	10.23	.....	Native.
Cold Spring	Full cream	59	13	95,000	9.99	.....	Native.
Union	Shipping	66	5-8	50,000	10.26	8 7/8	Ayrshires, Durhams, Holsteins.
Carroll	Full cream; white	61	16	122,000	10 1/4	10.30	Native.
Standerling	Full cream	61	15	.....	10.01	.....	Native.
Croghan	Full cream	55	9	60,000	10	.....	Native.
South Harrisburgh	Full cream	54	14	87,000	10	.....	Native.
Empire	Full cream	56	12	90,000	10	.....	Native.
Gowdy	Full cream	56	22	130,000	10	.....	Native.
Peterie	Full cream	60	20	150,000	10.26	.....	Native.
Valley	Full cream	62	10	80,000	10	.....	Native.
Auger, G. S.	Full cream	58	19	150,000	9.90	.....	Native.
Maple Ridge	Full cream	60	17	120,000	.....	.....	Native.
Houseville	Full cream	61	27	235,000	10.06	10.26	Native.
Sulphur Spring	Full cream	40	29	150,000	10	.....	Native.
Valley Spring	Full cream	53	12	89,000	10	.....	Native.
Glendale	Full cream	67	18	150,000	• 10.10	.....	Native.
Williams	Full cream	60	14	100,000	10	.....	Native.
Meadow Brook	Full cream	60	20	180,000	10	.....	Native.
Chrestien, T. N.	Full cream	63	13	110,000	.....	.....	Native.
Sears	Full cream	52	14	100,000	10	.....	Native.
River Street	Full cream	58	7	76,000	10	8 1/4	Mixed natives.
New Boston	Full cream	60	12	118,800	10	.....	Native mixed.
Valley Spring	Cheddar, part'ly sk'm'd	53	12	87,000	10	8 1/4	Native cows, Durhams, Jerseys.
E. J. Williams, No. 3	Full cream	53	5	52,700	9 1/4	9	Mixed natives.
Martinsburgh	Cheddar	60	14	130,400	10	9	Native crossed, Holstein & Gurn'y with Jersey.
West Martinsburgh	Full cream	56	15	140,000	10	8 1/4	Native or common.
Lowville	Full cream	40	23	150,000	10 1/4	8 1/4	Native or common.

Sulphur Spring.....	Full cream.....	30	20	150,000	10	8%	No....	Native.
High Mark.....	Full cream.....	42	11	80,000	10	9	No....	Native.
Sharp.....	Full cream.....	50	13	7,500	9%	8%	Yes....	Common, Holstein, Jersey and Ayrshire.
Old Harrisburgh.....	Full cream.....	53	14	150,000	9%	8%	Yes....	Native and Ayrshire.
State Road.....	Full cream.....	54	7	34,000	10.25	.....	No....	Native.
South Harrisburgh.....	.....	55	10	90,000	10	8%	Yes....	Common.
Williams.....	.....	56	10	105,000	10	8%	Yes....	Native, Durham and Holstein.
Champion Spring.....	.....	58	16	100,000	10	.....	Yes....	Native.
Greig.....	.....	59	2%	18,500	9.75	8%	Yes....	Native, crossed with Jersey, Dur'm & Holstein.
Eagle.....	.....	60	8	75,000	10	8%	No....	Native.
Spring Brook.....	.....	62	8%	94,800	10%	8%	Yes....	Native, Durham and Holstein.
Gardiner's Corners.....	.....	63	6	60,000	10	8%	No....	Common.
Valley.....	.....	65	8	75,400	10	8%	Yes....	Native, Durham and Holstein.
Otter Creek.....	.....	67	4	34,300	10	8%	No....	Native.
Boston Brand.....	.....	68	7	80,000	9%	8%	Yes....	Native.
Honseville.....	.....	69	20	200,000	10	8%	Yes....	Common.
Glendale.....	.....	71	14	140,700	9%	9	"	Native, Holstein, Jersey and Durham.
Petrie.....	.....	72	12	150,000	10	8%	"	Common and Holsteins.
Grass Valley.....	.....	73	11	183,705	9%	8%	No....	Native.
Welsh Hill.....	.....	74	9	83,800	10	8%	No....	Native.
Collinsville.....	.....	75	15	180,000	10	9	No....	Native.
Gregg, Robert E.....	Full cream.....	76	.....	.....	.....	.....	.....	Mixed natives.
Rachet.....	Full cream.....	77	.....	.....	.....	.....	Yes....	Common.
Mohawk Hill.....	Full cream.....	78	.....	.....	.....	.....	Yes....	Durham and Holstein.
High Market.....	American cheddar.....	80	11	100,000	10	8%	Yes....	Common.
Cloverdale.....	American cheddar.....	81	12	130,000	10%	9	Yes....	Native, crossed with Ayrshire, Holstein and Durham.
Miller.....	Cheddar cheese; col'd.	82	16	200,000	9.9	9	Yes....	Natives, Holsteins and Durhams.
Dairy Hill.....	.....	83	15	170,000	10	9	Yes....	Common.
Empire.....	.....	84	10	104,160	10	9	No....	Native.
Gilt Edge.....	.....	85	8	100,000	10%	8%	Yes....	Common.
Starling.....	.....	86	4	60,000	9%	9	Yes....	Native.
Farmers' Choice.....	.....	87	12	84,800	9.80	9	No....	Native.
Bowen.....	Full cream.....	88	15	150,000	9%	8%	Yes....	Native.
Maple Ridge.....	Full cream.....	89	10	110,000	9%	9	Yes....	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LEWIS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Miller's .....	.....	None.	.....	Yes.
Sterling .....	.....	"	.....	I have; cause, dry weather and milk not having proper care.
Old Harrisburgh .....	.....	"	.....	I have; cause, lack of proper care by patrons.
Lowville	Grass and shorts.	"	.....	Nothing to speak of.
Cold Spring	Grass and shorts.	"	.....	Yes; cause, came from something the cows ate in the pasture.
Union	Shorts, corn and green oats.	.....	Apt to make sweet curd; milk sours quickly; cheese gets off flavor; if fed sour, a little flavor is noticeable.	Yes; cause, milk not properly aired, put into cans and left to air itself.
Carroll	Shorts and corn meal.	None.	.....	I have.
Standerling	Bran.	"	Makes a sweet curd and a bad-flavored cheese.	No.
Croghan	Grass.	"	.....	Have had some; cause, think it came from stagnant water in most cases; milk brought twice a day.
South Harrisburgh .....	.....	"	.....	Yes, had some; cause, lack of good water.
Empire	Grass.	"	.....	Yes, had some; cause, lack of care by patrons.
Gowdy	Grass.	"	.....	None.
Peterie	Grass.	"	.....	None.
Valley	Grass.	"	.....	Yes, had some; cause, lack of care by patrons.
Augur, G. S.	Grass.	.....	Is not enough used to see any injury; takes pains to keep whey tub clean.	Yes; cause, patrons not taking good care of cans.
Maple Ridge	Grass.	None.	.....	Hardly any; cause, lack of care by patrons.
Houseville .....	.....	"	.....	Yes; cause, cows in heat and lack of care by patrons.
Sulphur Spring	Grass.	"	.....	Not very much; cause, lack of care by patrons.
Valley Spring	Grass.	"	.....	Some; cause, lack of care by patrons.
Glendale	Grass.	"	.....	None.
Williams	Grass.	"	.....	None.

Meadow Brook	Grass.	"	.....	Very little; cause, lack of care by patrons.
Chrestien, T. N.	Grass.	"	.....	Yes; cause, improper care by patrons.
Sears	Grass.	"	.....	Yes; cause, improper care and wild feed.
River Street	Shippes and pasture.	"	Bad flavor and porous cheese.	Very little; cause, neglect to keep cans clean and aerate it.
New Boston	Pasture.	"	It effects flavor and makes porous cheese.	Little cause; not being properly cooled.
Valley Spring	Grass and hay, wheat shorts.	"	Very little; cause, animal heat not removed from milk before reaching factory.	.....
E. J. Williams, No. 3	Pasture.	"	.....	A very little; cause, too close confinement in the cans over night.
Martinsburgh	Grass, hay, sowed corn and wheat bran.	Yes ..	Have noticed no difference with the milk; only two feed whey.	Yes; cause, not getting the animal heat from the milk before delivering it to the factory.
West Martinsburgh	Grass and hay.	None.	Do not think it makes any difference.	Yes; cause, poor water.
Lowville	Grass and hay.	"	Spills the flavor of milk.	Yes; cause, animal heat left in milk before bringing to factory.
Sulphur Springs	Grass and hay.	"	Spills the flavor of the milk.	Yes; cause, not stirring the milk.
High Mark	Grass and hay.	Yes ..	Spills the flavor of the milk.	Yes; cause, poor water.
Sharp	Grass and grain.	None.	Makes tainted milk.	Yes; cause, do not think the patrons take proper care of the milk.
Old Harrisburgh	Grass, hay and shorts.	"	Makes the cheese have sweet flavor.	Yes; cause, dirty milk, manure in milk.
State Road .....	.....	"	.....	Yes; cause, bad water and lack of care by patrons.
South Harrisburgh	Grass, hay, shorts and meal.	Yes ..	Do not see any bad effect.	Yes; cause, poor water.
Williams	Grass, sowed corn and wheat bran.	Yes ..	No bad effect, only increases the flow of milk.	None.
Champion Spring .....	.....	None.	.....	Yes; cause, patrons not taking care of milk.
Greig	Grass, sowed corn, hay, meal, bran, etc.	"	.....	None.
Eagle	Grass and hay.	Yes ..	Gives the cheese bad flavor.	None.
Spring Brook	Grass, sowed corn and wheat bran.	None.	.....	None.
Gardiner's Corners	Grass and hay.	"	Spills the flavor of the cheese.	None.
Valley	Grass and sowed corn.	"	.....	Yes; cause, not ventilating and properly cooling before closing the cans before bringing to the factory.
Otter Creek	Grass and hay.	"	.....	None.
Boston Brand	Grass and hay.	"	Spills the flavor of cheese.	Yes; (
Houseville	Grass and hay.	"	Do not know.	Yes; (
Glendale	Grass, wheat and meal.	"	.....	Yes; (
Petrie	Grass and hay.	"	Makes the milk smell like the whey.	Yes; (
Grass Valley	Grass, sowed corn, wheat middlings.	"	.....	Yes; (
				profing to factory.
				proper care
				cooled be-
				ther,
				ntilating or
				ore deliver-

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—LEWIS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Welsh Hill.....	Grass, sowed corn and wheat bran.	None.	.....	None.
Collinsville	Grass and hay.	"	.....	No.
Gregg, Robert E.....	Pasturage and shorts.	.....	.....	Yes; cause, insufficient cooling.
Rachet	Grass and hay.	None.	Do not know.	Yes; cause, do not cool the milk enough.
Mohawk Hill.....	Grass, wheat bran and meal.	"	.....	.....
High Market	Grass and hay.	"	Makes poor milk.	None.
Cloverdale	Grass, sowed corn and wheat bran.	"	.....	Yes; cause, not properly ventilating and cooling milk before bringing to factory.
Miller	Grass, sowed corn, hay, oats, wheat bran.	"	.....	None.
Dairy Hill	Grass and hay.	"	Bad effect on the milk.	Yes; cause, improper care of milk, and poor water.
Empire	Grass, sowed corn and wheat bran.	"	.....	Yes; cause, not properly airing and cooling the milk before delivering to factory.
Gilt Edge.....	Grass, hay, shorts.	"	Would make a stinking curd.	Yes; cause, patrons do not take proper care of milk.
Staring	Grass and hay.	"	Makes the milk have whey flavor.	Yes; cause, patrons not taking proper care of milk.
Farmers' Choice	Grass, sowed corn and wheat bran.	"	.....	Yes; cause not properly cooling, and allowing it to heat in cans before delivering to factory.
Bowen	Grass and shorts.	"	Makes sweet-flavored cheese.	Yes; cause, patrons not taking proper care of milk.
Maple Ridge	Grass and shorts.	"	Would make poor cheese.	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LEWIS COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Müller's.....	Do not know of any.	Good.....	At Constableville, in a fine dairy country.	Good.....	.....
Sterling.....	I do not know of any difference.	First-class.	Good.....	".....	.....
Old Harrisburgh.....	Do not know of any.	Fair.....	.....	Fair.....	.....
Lowville.....	Do not know of any.	Good.....	Near village of Lowville.	To creek...	.....
Cold Spring.....	Do not know of any.	".....	One mile south of Orogan.	".....	.....
Union.....	No material difference.	Good.....	First-class.....	Fair.....	.....
Carroll.....	There is a difference, caused by some feeding grain and others not.	Good.....	.....	.....	.....
Standerling.....	Do not know of any.	Fair.....	One-half mile from Orogan village.	To creek...	.....
Orogan.....	Do not know of any.	Good.....	Six miles west of Lowville.	".....	.....
South Harrisburgh.....	Do not know of any.	Fair.....	Seven miles east of Lowville.	Not good...	.....
Empire.....	Do not know of any.	Good.....	.....	.....	.....

NEW YORK.

This factory has been troubled with sweet flavor in their cheese; are not having it now; could not find the cause.

This factory is having a good deal of trouble with bad flavor in their cheese; appears to be in the milk.

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 -- LEWIS COUNTY -- (Continued).

Drainage.	Remarks.
Good, to sm'll cre'k
Good, to creek.
To creek...
Good, to creek.
Good, to sm'll cre'k
To creek...
"
"
Good, to creek.
Good, to creek.
Good, to creek.
Good, to Salm'n riv.
Fair.....
First-class.
Good.....

Valley Springs.....	Milk very uniform as regards cream and quality of milk.	"	Located on the highway.	Small brook	The butter made at this factory is only a portion made for use by patrons; none sold on the market.
E. J. Williams, No. 3.....	..... factory is very test close enough difference there	First-class. Good.....	First-class. Good.....	Good.....	.....
Martinsburgh .....	..... do not know how	"	"	Good.....	.....
West Martinsburgh.....	..... but do not know how it could be adjusted.	" .....	" .....	" .....	.....
Lowville .....	..... No not think there is any difference.	" .....	" .....	" .....	.....
Sulphur Spring.....	..... r difference.	" .....	" .....	" .....	.....
High Mark.....	..... rain.	" .....	" .....	" .....	.....
Sharp.....	..... difference.	" .....	" .....	" .....	.....
Old Harrisburgh .....	.....	Poor.....	Poor	Poor .....	.....
State Road .....	.....	.....	.....	.....	.....
South Harrisburgh	Do not think there is any difference. There is no difference by any test I have made.	Good.....	Good.....	Good.....	much pleased with the work.
Williams	Find very little difference.	"	In East Martinsburgh. In village of Beaver Falls.	Into brook. Good.....	.....
Champion Spring .....	.....	" .....	.....	Good.....	.....
Greig .....	.....	" .....	Drain to river..	.....	trying to get all the best ideas.
Eagle.....	no	Good.....	Located on village grounds	Into Spring brook.	.....
Spring Brook .....	.....	" .....	Good.....	Good.....	.....
Gardner's Corners	not	Poor.....	"	Open ditch.	.....
Valley .....	.....	Good.....	Good.....	Open drain.	.....
Otter Creek .....	.....	.....	.....	Good.....	.....
Boston Brand .....	.....	.....	.....	.....	.....
Housesville	at	" .....	" .....	" .....	.....
Glendale .....	.....	" .....	On a side hill..	To creek ..	.....
Petrie	in	"	Good.....	Good.....	.....
Grass Valley.....	ry: uly	" .....	.....	Open drain	.....
Welsh Hill .....	.....	Fair.....	.....	Small brook	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- LEWIS COUNTY -- (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Collinsville.....	Think there is; but don't know how it could be adjusted.	Good.....	Good.....	Good.....	.....
Gregg, Robert F.....	Think all the milk is about the same.	".....	".....	".....	.....
Itschet.....	Do not think there is much difference.	".....	Mohawk Hill..	Rainy bro'k	.....
Mohawk Hill.....	There is a difference; have made no experiments to get at the actual dif-	".....	Good.....	Good.....	.....
High Market.....		Good.....	".....	Cov. drain..	.....
Cloverdale.....		".....	".....	".....	.....
Miller.....		".....	Good.....	Cov. drain..	.....
Dairy Hill.....		".....	".....	Good.....	.....
Empire.....	to	".....	New Bremen..	Too weak..	.....
Gilt Edge.....	not	".....	Good.....	Good.....	.....
Starling.....	ow	".....	".....	".....	.....
Farmers' Choice.....	as	".....	".....	".....	.....
Bowen.....		".....	".....	".....	.....
Maple Ridge.....		".....	".....	".....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LIVINGSTON COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Hunt's.....	Portage.....	Aug. 6	Cheese.....	7	63	500	7,000	...	.....	.....	.....
Nunda.....	Nunda.....	6	"	6	45	280	3,400	...	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LIVINGSTON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Hunt's	Full cream	60	11	120,000	10	8½	Yes...	Native, grade Durhams and Holsteins.
Nunda.....	Full cream	60	7	75,000	10	8½	Yes...	Native, grade Jerseys and Holsteins.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — LIVINGSTON COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effects of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Hunt's	Grass and corn fodder.	None.	It would make silvery curd and the cheese lumpy.	With the animal lipping milk to escape.
Nunda	Grass and corn fodder.	"	It would make silvery curd and the cheese lumpy.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- LIVINGSTON COUNTY -- (Continued).

NAME OF FACTORY.	Remarks.	MISCELLANEOUS.		
		Condition of factory.	Location and surroundings.	Drainage.
Hunt's	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Fair.....	Good.....	Fair.....
Nunda.....	There is some difference; I don't think it can be equalized. I would not question before the patrons; it could not be equalized satisfactorily.	Good.....	"	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	TOWNS.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
North Brookfield	Brookfield	June 28	Cheese	9	35	380	7,000	...	...	...	...
Hubbardville	Hamilton	29	"	9	31	350	7,000	...	...	...	...
.....	Sullivan	July 10	"	9	36	400	8,000	...	...	...	...
.....	Sullivan	11	"	9	26	400	7,800	...	...	...	...
.....	Sullivan	12	"	9	16	250	4,500	...	...	...	...
.....	Sullivan	13	"	9	30	400	8,000	...	...	...	...
.....	Madison	13	Butter	9	40	440	9,000	350	...	26	...
.....	Madison	13	"	9	18	280	5,500	...	...	...	...
.....	Sullivan	13	Cheese	9	23	380	7,000	...	...	...	...
.....	Sullivan	14	"	9	33	600	9,500	...	...	...	...
.....	Brookfield	26	"	7	16	...	4,500	70	15,000	66	23
.....	Lebanon	1	Butter and cheese	6	14	300	4,500	70	15,000	66	23
.....	Eaton	1	"	7	40	600	9,000	140	30,000	66	23
.....	Madison	1	"	6	7	100	1,500	60	7,000	25	23
.....	Eaton	2	"	6	34	385	6,470	217	43,455	25	30
.....	Hamilton	3	Butter	6	29	270	6,000	...	...	...	...
.....	Smithfield	4	Cheese	6	23	380	7,000	...	...	...	...
.....	Sullivan	8	"	6½	12	100	2,000	80	15,000	25	31
.....	Hamilton	8	Butter	6	31	375	5,000	...	...	...	...
.....	Hamilton	9	Cheese	7	12	150	2,800	100	20,000	24½	23
.....	Hamilton	9	Butter and cheese	7	23	100	1,400	50	8,000	30	24
.....	Hamilton	9	"	6	11	180	2,700	110	20,000	24	25
.....	Hamilton	10	Butter	6	4	80	1,400	40	7,000	25	25
.....	Hamilton	10	"	6	27	226	2,500	100	20,000	24½	25
.....	Hamilton	10	"	6	12	160	1,500	60	17,250	26	25
.....	Hamilton	10	"	7	18	300	3,000	150	23,000	25	26
.....	Hamilton	11	"	7	37	400	6,000	...	...	...	...
.....	Sullivan	15	Cheese	6	26	300	5,000	100	20,000	29	26
.....	Fenner	15	Butter and cheese	6	23	270	6,400	...	...	...	...
.....	Stockbridge	21	Cheese	6	43	500	9,500	...	...	...	...
.....	Stockbridge	22	"	6	30	225	5,000	...	...	...	...
.....	Stockbridge	23	"	6	30	225	5,000	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.
Bridgeport.....	Bridgeport.....	Aug. 26	Cheese.....	6	34	350	6,000	...	...	...	...
.....	Sullivan.....	26	".....	6	28	260	3,000	...	...	...	...
.....	Sullivan.....	27	".....	6	18	350	3,000	...	...	...	...
.....	Brookfield.....	30	".....	6	26	280	3,500	...	...	...	...
.....	Brookfield.....	31	Butter and cheese.....	6	11	150	2,000	80	15,000	90	25
.....	Brookfield.....	1	Cheese.....	6	20	260	3,000	70	14,000	50	25
.....	Brookfield.....	2	Butter and cheese.....	6	12	200	2,500	...	...	...	...
.....	Brookfield.....	2	Cheese.....	6	31	350	4,500	...	...	...	...
.....	Brookfield.....	3	Butter and cheese.....	6	33	375	4,000	...	...	...	...
.....	Brookfield.....	4	Butter and cheese.....	6 1/2	30	400	5,000	80	13,000	90	23
.....	Brookfield.....	4	Cheese.....	6	13	150	...	...	...	...	...
.....	Brookfield.....	5	".....	7 1/2	15	225	4,000	...	...	...	...
.....	Lebanon.....	6	Butter and cheese.....	6	17	300	4,000	50	9,000	100	21
.....	Hamilton.....	6	Butter.....	6	8	150	2,000	75	15,000	25	23
.....	Georgetown.....	6	Butter and cheese.....	6	13	200	3,200	60	6,000	90	23
.....	Georgetown.....	6	".....	6	25	325	3,500	100	12,000	30	24
.....	Georgetown.....	8	".....	6	22	350	4,500	115	25,000	90	22
.....	Georgetown.....	9	".....	6	20	250	4,800	...	...	...	...
.....	Lenox.....	13	Cheese.....	6 1/2	41	600	10,000	175	33,000	80	24
.....	Eaton.....	17	Butter and cheese.....	6	8	120	2,125	50	9,000	24	26
.....	Cazenovia.....	18	Butter.....	12	6	200	...	125	35,600	...	23
.....	Cazenovia.....	18	Butter and cheese.....	7	47	664	9,000	240	50,000	50	24
.....	Eaton.....	18	".....	7	30	400	5,000	180	30,000	50	24
.....	Cazenovia.....	19	".....	7	47	750	10,000	200	45,000	50	25
.....	Cazenovia.....	19	Cheese.....	6	40	500	8,000	...	...	...	...
.....	De Ruyter.....	19	".....	6	25	300	4,000	...	...	...	...
.....	De Ruyter.....	19	Butter and cheese.....	6	25	300	4,000	...	...	...	...
.....	Cazenovia.....	19	Butter and cheese.....	6	9	150	25,000	50	9,000	50	24
.....	Cazenovia.....	20	".....	6	17	250	5,000	...	...	...	...
.....	Brookfield.....	2	Cheese.....	6	17	250	5,000	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
North Brookfield	Full cream	55	13	100,000	.....	.....	Native and Holstein.
	Full cream	60	12	100,000	10	8%	Ayrshire, Holstein, Durham, Jerseys.
	Full cream	59	15	135,000	10 20	.....	Holstein and native.
	Full cream	63	13	125,000	9 80	.....	Native.
	Full cream	62	7	65,000	10 30	.....	Native.
	Full cream; shipping.	60	13	.....	.....	.....	Mixed with Holsteins.
	Full cream .....	.....	.....	.....	.....	.....	Holstein, grades.
	Full cream	64	9	75,000	10 15	.....	Native.
	Full cream	60	12	125,000	10 40	.....	Native.
	Shipping	62	15	150,000	10 35	.....	Holstein and natives.
	Night skims; export.	55	6	65,000	12%	7	Native.
	Night skims; export.	55	6	65,000	12%	7	Native.
	Night skims; export.	55	12	132,000	12%	7	Native.
	Full cream	53	5	25,000	10	9%	Jerseys, native, Holstein and Ayrshires.
	Full cream	65	7	90,000	10 15	.....	Native, Ayrshires, Holstein.
	Full cream	60	8	100,000	10%	8%	Holstein and natives.
	Shipping	60	4-12	100,000	10	.....	Native.
	Skim	54	4	25,000	13	6	Holstein, Ayrshire and Durham.
	Skim	40	3	14,000	14	6	Native.
	.....	.....	.....	.....	.....	.....	Native.
	.....	.....	.....	.....	.....	.....	Native.
	.....	.....	.....	.....	.....	.....	Native.
	.....	.....	.....	.....	.....	.....	Native.
	Full cream	60	10	150,000	10	9	Native and Holstein.
	Half skim	50	9	100,000	11	8	Native.
	Full cream	60	9	70,000	.....	.....	Native.
	Full cream; white	56	25	125,000	.....	.....	Native and Holstein.
	Full cream	56	14	70,000	.....	.....	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Bridgeport.....	Full cream	59	11	118,000	10.25	10½	.....	Native.
Lakewood	Full cream	58	5	55,000	10.25	9	.....	Native.
Windsor.....	Full cream	61	5	55,000	10.25	8½	Yes...	Native.
Union	Full cream	59	6	90,000	10.25	9	.....	Native and Holsteins.
Pleasant Valley Cream'ry	Skim.....	50	3	30,000	13	6	.....	Native.
West Brookfield.....	Full cream	58	6	55,000	10	9	Yes...	Native.
South Brookfield.....	Skim.....	41	5	45,000	12	6	No...	Native and Holstein.
Excelsior.....	Full cream	60	8	100,000	10	9	.....	Native.
E. Harris.....	Full cream	58	7	100,000	10.15	9	Yes...	Native and Holstein.
Baldwin.....	Half skim.....	40	14	100,000	9½	8½	No...	Holstein and native.
Brown, D. M.....	Full cream	35	5	50,000	10	9	.....	Holstein and native.
Mott.....	Full cream	60	7	80,000	10	9	Yes...	Native.
Union.....	Skim.....	45	7	60,000	11	5½	No...	Native and Holstein.
Earlville Creamery.....	.....	.....	.....	.....	.....	.....	.....	Native.
Browns.....	Skim.....	60	5	60,000	11	7	Yes...	Native and Holstein.
Trout Brook.....	Skim.....	60	5	60,000	14	6	.....	Native and Holstein.
Hawks.....	Skim.....	40	10	70,000	12	6½	.....	Native and Holstein.
Clockville.....	Full cream	62	7	69,000	10.36	.....	.....	Native and Holstein.
Morrisville.....	Skim.....	60	12	163,000	11	8	No...	Native.
Blodgett's Creamery.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakeland Creamery.....	.....	.....	.....	.....	.....	.....	.....	.....
Eaton Creamery.....	Skim.....	40	14	175,000	11½	7½	No...	Native and Holstein.
No. 9.....	Skim.....	50	8	80,000	11½	6	Yes...	Native.
New Woodstock Cream'ry	Skim.....	55	17	150,000	11½	7	.....	Native.
Sheds Corners	Full cream	40	20	94,500	10	8	Yes...	Native.
De Ruyter Reservoir.....	Full cream	40	12	86,400	10	8	Yes...	Native.
Union Creamery.....	Skim	50	10	100,000	13½	5	No...	Native.
Newton.....	Skim	50	4	86,000	12½	7	No...	Native.
M. M.....	Full cream	60	8	70,000	10	.....	Yes...	Holstein, Durham and natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to milk and the cause of the same.
Hubbardsville Creamery...	Pasture and bran.	None.	It does not affect the milk unless they feed too much.	Very little; cause, do not know.
Excelalor	Pasture.	"	Don't think it hurts it.	Yes; cause, not proper care taken of it by patrons.
Perryville	Pasture.	Yes.	It does not affect the milk.	None.
Clark & Lamunton .....	.....	None.	.....	I have; cause, poor cans and swamp grass.
Stockbridge .....	.....	"	.....	I have; lack of care on the part of patrons.
Valley Mills .....	.....	"	.....	I have had some; cause, lack of care by patrons.
Bridgeport	Grass and corn stalk.	"	.....	Yes; cause, not proper care taken of it by patrons.
Lakewood	Pasture.	"	Taints it.	Yes; cause, not proper care taken of it by patrons.
Windsor	Pasture.	"	Taints it.	Yes; cause, not proper care taken of it by patrons and poor water for cows.
Union	Pasture.	"	Taints milk.	Yes; cause, not proper care taken of it by patrons.
Pleasant Valley Creamery...	Pasture, bran and corn fodder.	"	Don't know.	None.
West Brookfield	Pasture.	"	Taints milk.	Yes; cause, not proper care taken by patrons.
South Brookfield	Pasture.	"	Tainted milk.	No; cause, not good care taken of milk.
Excelalor	Pasture.	"	.....	Yes; not proper care taken of it and poor water.
E. Harris ...	Pasture and fodder corn.	"	Taints the milk.	Yes; cause, no good care taken by patrons.
Baldwin	Pasture and fodder corn.	"	Taints the milk.	Yes; cause, not proper care taken of milk.
Brown, D. M.	Pasture.	"	Sours the milk.	Yes; cause, poor water and not proper care taken of milk by patrons.
Mott	Pasture.	"	.....	Yes; cause, not washed clean.
Union	Pasture.	"	Taints the milk.	Yes; cans not kept clean.
Earlville Creamery	Pasture.	"	.....	None.

Brown's.....	Pasture and fodder corn.	"	Taints the milk.	Yes; cause, can't tell.
Trout Brook.	Pasture and bran.	"	Taints the milk.	None.
Hawks	Pasture and bran.	"	Taints the milk.	Yes; cause, don't know.
Clockville.....	Grass.	"	.....	Yes; cause, improper care of milk and wild feed in pasture.
--	Pasture and bran.	"	Taints the milk.	Yes; cause, not good water for cattle.
/	"
.....	Pasture.	"	Taints the milk.	Yes; cause, poor water for cattle.
.....	Pasture.	"	Taints the milk.	Yes; cause, poor water.
.....	Pasture and fodder corn.	"	Taints the milk.	No; cause, not proper care taken of cans by patrons.
Shed's Corners	Pasture.	"	.....	Yes; cause, it comes from a cow being over-heated.
.....	Pasture.....	"	I can not say.	None.
.....	Pasture.....	"	.....	None.
.....	Pasture.....	"	.....	Yes; cause, stale water.
.....	Very little except sowed corn.	"	It produces no acid in milk.	Not to this factory.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MADISON COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in quality of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
North Brookfield	Do not know of any difference.	Not the best	Very good.	Not good.	Had trouble to get cheese sold; make the cheese and as he had not been in curd, and he ap- get a good idea how to manage; think he will have no further trouble. See note at end of table.
Hubbardsville .....	.....	Good.....	Near Che- nango riv. Good.....	Good.....	
Excelsior	Do not know of any difference.	Very good.	"	"	
Osgood	Do not know of any.	"	"	"	
Lakeport .....	.....	Good.....	On Oneida lake.	"	
Solsville .....	.....	Poor.....	Poor.....	Poor.....	
Big Spring .....	.....	Good.....	Three mill's east of Media Co.	First-class.	
Maple Grove .....	.....	Not good.	Not good.	Poor	This factory is not troubled with tainted milk; but the curd does not cook good and is inclined to be alppery; think it must come from something the cows eat in the pastures.

East Boston..... Lamb's, E. A.....	Has not discovered any difference.	Good.....	Good.....	Good.....	The same methods of inspection employed as in other factories: milk generally of good quality and two samples taken for analysis.
Randallville.....	Too complicated to answer.	".....	On side-hill	".....	
Payne's.....	All runs about the same.	Old.....	On side of highway.	Poor.....	
Thompson's.....	All runs about the same.	Good.....	In a valley.	Good.....	not going to run it after this season.
Pratts Hollow.....	Too complicated to answer.	Poor.....	On highw'y near good spring-b'k	Poor.....	good-class day. who
Hamilton Creamery.....	Do not know.	Good.....	Good.....	Good.....	good: day. been id the
Peterboro.....	Think there is a difference, but could not say how it could be equalized.	Poor.....	Near str'm of water.	Poor.....	ing butter only.
East Boston.....	Too complicated to answer.	Good.....	N'r spring-brook.	Good.....	rage, low at
Rock Spring.....	Can't say.	Poor.....	On highw'y	".....	or hours be- patrons take
Hubbardville.....	Difficult question to answer.	Good.....	Good.....	".....	sour milk home.
Orumb's Creamery.....	Too complicated a question.	".....	On main r'd	".....	At this factory the Danish Weston separator, of the largest size, is used, and the skim-milk made into cheese.
.....	same.	Poor.....	On highw'y	".....	
.....	answer.	Good.....	Good.....	Open ditch.	
.....	at Holstein	Poor.....	On highw'y	None.....	
.....	answer.	Good.....	Good.....	Poor.....	
.....	ference.	Poor.....	On main r'd	None.....	
.....		Good.....	Good.....	Into spr'g-brook.	A separator is used here.
Excelsior.....	None.	".....	".....	Open drain	
Perryville.....	None.	".....	".....	Vacant lot.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- MADISON COUNTY -- (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Clark & Lamunton	I do not know of any. I can not determine. I do not know of any. None.	Fair	Good	Good	Salemman thinks the State brand is a good thing if all cheese were branded what they are.
Stockbridge		Good	"	First-class	
Valley Mills		Fair	"	Good	
Bridgeport		Good	"	"	
Lakewood	None.	"	On main road	None	
Windsor	None.	"	South side of Oneida lake.	Into lake ..	
Union	None.	"	On side hill	Good	
Pleasant Valley Creamery.	None.	Poor	On main road.	None	
West Brookfield	None.	Good	Good	Into pond ..	
South Brookfield	None.	Poor	On bank of creek.	Into creek ..	
Excelsior	None.	Good	Good	Into ditch ..	
E. Harris	No, if patrons bring it as it comes from the cow.	Poor	On bank of creek.	Into creek ..	This factory is one of the old landmarks in this county; been in operation over twenty years.
Baldwin	None.	Good	Good	Open drain ..	
Brown, D. M.	None.	Poor	On main road.	Poor	
Mott	None.	Good	Good	Fair	
Union	None.	"	"	"	
Earlville Creamery	None.	Poor	"	"	
Brown's	None.	Good	"	"	
Trout Brook	None.	"	"	"	
Hawks	None.	Poor	"	Poor	
Clockville	Do not know of any.	Fair	"	Fair	T had a good deal of milk flavors; our process of and the cheese-very much pleased.

Morrisville.....	None.	Good.....	".....	Good.....	.....
Bloodgett's Creamery.....	.....	".....	".....	".....	.....
Lakeland Creamery.....	.....	".....	".....	".....	.....
Katon Creamery.....	None.	Poor.....	".....	Into stream	.....
No. 9.....	None.	Good.....	At Webster station.	Good.....	.....
New Woodstock Creamery.....	None.	".....	Good.....	Good.....	This is one of the in the county, as high as 40,000 per day; it is w good water.
Shed's Corners.....	.....	".....	Shed's Cor.	".....	.....
De Ruyter Reservoir.....	None.	".....	Good.....	".....	.....
Union Creamery.....	.....	".....	".....	".....	.....
Newton.....	.....	".....	Good Hill.....	".....	.....
M. M.....	.....	".....	Good.....	".....	.....
That matter is being studied up by scientific men; think I will be better able to answer in the near future.					

NORZ.—At the cheese institute held here a practical illustration was given of the method of manufacture. Process: Milk in good condition,

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MONROE COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Produce of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Genesee Valley Creamery	Wheatland	Oct. 27	Butter	12	60	400	.....	100	45,000	.....	25
Mendon	Mendon	27	Cheese	5	24	150	2,300	...	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MONROE COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Genesee Valley Creamery	.....	.....	.....	.....	.....	.....	.....	Grade and Jerseys.
Mendon	Full cream	45	5	30,500	10	10	No....	Common native cows.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—MONROE COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Genesee Valley Creamery..	Sowed corn, bran, meal and middings.	None.	Could not tell what the effect would be by feeding whey to cows; never worked any milk of whey.	None.
Mendon.....	Grass.....	"		Has had; cause, carelessness of the patron in not keeping the milk can in a cleanly condition.

ABSTRACT OF FACTORY INSPECTIONS FOR 1898 — MONROE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Genesee Valley Creamery. Mendon	No difference in the cream brought to this creamery.	Good..... "	On dry grounds.. On dry grounds..	Good..... "	This factory is run by the Gauge Fairland system; do not use the old test. (See rules below.)

RULES FOR CREAMERY PATRONS FOR SETTING MILK.

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ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MONTGOMERY COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Empire.....	Florida.....	July 24	Cheese.....	6	9	110	2,000	...	...	...	...
Minaville.....	Florida.....	July 24	Butter and cheese.....	6	39	425	9,500	...	...	...	...
Mohawk Valley Creamery.....	Florida.....	July 24	Butter and cheese.....	12	56	500	2,000	500	...	4	28
Cayadutta.....	Mohawk.....	July 25	Cheese.....	6	27	300	6,000	...	...	...	...
Empire Cheddar.....	Mohawk.....	July 26	".....	6	10	150	2,000	...	...	...	...
Stone Arabia.....	Palatine.....	July 28	".....	6	20	350	6,000	...	...	...	...
Spraker.....	Palatine.....	July 28	".....	6	10	225	3,000	...	...	...	...
Mohawk.....	Mohawk.....	July 27	".....	6	15	175	3,264	...	...	...	...
Lewis, Henry.....	Palatine.....	July 27	".....	6	18	200	3,700	...	...	...	...
Nellis, A.....	Palatine.....	July 27	".....	6	89	198	3,900	...	...	...	...
Dockstader.....	Palatine.....	July 28	".....	6	16	230	5,000	...	...	...	...
Canajoharie.....	Canajoharie.....	July 30	".....	6	18	...	3,800	...	...	...	...
Flat Creek.....	Root.....	July 30	".....	6	33	400	5,000	...	...	...	...
Lyker's Corners.....	Root.....	July 30	".....	5 1/2	14	175	2,500	...	...	...	...
Van Alstyne.....	Canajoharie.....	July 31	".....	4	11	200	2,100	...	...	...	...
Buell.....	Canajoharie.....	July 31	".....	6	29	342	7,000	...	...	...	...
Waterville.....	Canajoharie.....	July 31	".....	7	38	400	10,000	...	...	...	...
Frey's Bush.....	Minden.....	Aug. 2	".....	6	7	125	2,500	...	...	...	...
Seeber Lane.....	Canajoharie.....	Aug. 2	".....	6	17	265	4,500	...	...	...	...
Smith Creek.....	Palatine.....	Aug. 3	".....	7	21	400	9,000	...	...	...	...
Sand Hill.....	Minden.....	Aug. 3	".....	7	17	375	6,000	...	...	...	...
Orange County Milk Association.....	Minden.....	Aug. 4	Butter and cheese.....	12	24	...	6,000	21,777	...	38	...
Zoller.....	Minden.....	Aug. 6	Cheese.....	7	17	425	8,000	...	...	...	...
Fort Willett.....	Minden.....	Aug. 6	".....	6	14	317	5,800	...	...	...	...
Fair View.....	Minden.....	Aug. 6	".....	7	9	182	4,300	...	...	...	...
Hallsville.....	Minden.....	Aug. 7	".....	7	20	500	8,000	...	...	...	...
Brookman's Corners.....	Minden.....	Aug. 7	".....	7	22	375	6,500	...	...	...	...
Van Dusen, E. W.....	Minden.....	Aug. 7	".....	6	24	348	6,000	...	...	...	...
Christman, G. H.....	St. Johnsville.....	Aug. 9	".....	7	16	328	6,000	...	...	...	...
Mother Creek.....	St. Johnsville.....	Aug. 9	".....	6	19	...	4,884	...	...	...	...

Smith, A. & Co.....	9	"	.....	8	21	400	8,000	....	.....	.....	.....
Klock & Nellis	9	"	.....	6	14	300	3,986	....	.....	.....	.....
St. Johnsville.....	8	"	.....	6	28	450	7,710	....	.....	.....	.....
Fox	10	"	.....	....	...	....	.....	....	.....	.....	.....
Tribes Hill.....	10	"	.....	6	15	200	3,496	....	.....	.....	.....
St. Johnsville.....			.....							
St. Johnsville.....			.....							
St. Johnsville.....			.....							
Mohawk.....			.....							
Mohawk.....			.....							

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—MONTGOMERY COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Empire.....	Full cream	50	4	25,000	10½	8½	Yes...	Native.
Minaville.....	Full cream	54	16	110,000	10½	8½	"	Native and grades.
Mohawk Valley Cream'ry.....	Pot cheese .....	.....	.....	.....	.....	.....	.....	Native and Jerseys.
Cayadutta	Full cream	60	10	90,000	10	10½	Yes...	Natives.
Empire Cheddar.....	Full cream	50	3	30,000	10½	8½	"	Natives.
Stone Arabia	Full cream	63	8	114,000	10.10	8½	"	Natives.
Spraker	Full cream	60	5	40,000	10.1	8½	"	Natives.
Mohawk.....	Full cream	60	6	40,000	10	8½	.....	Natives.
Lewis, Henry.....	Full cream	60	5	63,000	10	8½	No....	Natives.
Nellis, A.....	Full cream	60	5	60,000	10	8½	Yes...	Natives.
Dockstader	Full cream	60	6	90,000	10½	8	"	Natives.
Canajoharie.....	Full cream	56	7	81,500	10½	8	"	Native and grades.
Flat Creek.....	Full cream	60	8	100,000	10.12	9½	"	Native.
Lyker's Corners	Full cream	59	4	38,000	10	9½	No....	Native.
Van Alstyne	Full cream	55	3	.....	10	8½	Yes...	Native.
Buell	Full cream	67	8	70,000	10½	8½	.....	Native and grade, Holstein.
Waterville.....	Shipping	65	13	150,000	.....	.....	.....	.....
Frey's Bush.....	Shipping	60	3	40,000	10	8½	No....	Natives.
Beeber Lane.....	Skim.....	60	6	64,000	10	8½	Yes...	Mixtures.
Smith Creek	Full cream	60	15	200,000	10	8½	"	Natives and Holsteins.
Sand Hill.....	Full skim.....	60	10	130,000	10	9	"	Natives.
Orange County Milk Association.	Skim.....	40	...	19,348	11.6	.....	No ...	Natives and grades.
Zoller.....	Skim.....	65	12	145,000	10.21	9	"	Native and grades.
Fort Willett.....	Full cream	53	9	110,000	11	8	Yes...	Natives, grade and Holsteins.
Fair View	Full cream	64	5	70,000	10.86	8½	"	Native, grades, Holstein and Ayrshire.
Hallsville.....	Full weight skim	65	12	150,000	10	8½	No....	Native and grades.
Brookman's Corners.....	Full cream	61	11	120,000	10.41	8½	Yes...	Native.
Van Dusen, E. W	Full cream	60	8	110,000	9.81	8½	.....	Native and grades.

Christman, G. H.....	Full cream	60	10	120,000	10	8%	Yes...	Native and grades.
Mother Creek.....	Full cream	60	6	.....	10.20	8%	..	Native and grades.
Smith, A. & Co.....	Full cream	42	16	165,000	10.20	8%	No ...	Native and grades.
Klock & Nellis.....	Full cream	60	6	.....	.....	8%	.....	Native.
St. Johnsville.....	Full cream ...	54	11	120,000	10.25	8%	No ...	Native.
Fox.....	.....	.....	....	.....	.....	.....	.....	.....
Tribes Hill.....	Full cream	60	5	60,000	10	8%	Yes...	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — MONTGOMERY COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey on milk.	With regard to milk and the causes of the same.
Empire Minerville.....	Grass, hay and grain Grass, hay and grain	None.	.....	None. Yes, considerable; cause, extreme hot weather; and cows eating weeds, especially elder.
Mohawk Valley Creamery Cayadutta.....	Grass, hay and bran Grass, hay and grain	"	.....	Yes, during hot days and cool nights; cause, the animal heat is not gotten out of milk properly.
Empire Cheddar.....	Grass, hay and ensilage.	"	.....	Yes, some; cause, don't know.
Stone Arable Spraker.....	Grass, hay and grain Grass, hay and grain	"	.....	bad water. feed in water and un-
Mohawk.....	Grass, hay and grain	"	.....	Little; cause, not cooling milk properly, and sour grass.
Lewis, Henry Nellis, A.....	Grass, hay and grain Grass, hay and grain	"	.....	hot weather, utensils and swampy
Docketader Canajoharie.....	Grass, hay and grain Grass, hay and grain	"	.....	don't know. not cooling the milk
Flet Creek.....	Grass, hay and grain	"	.....	ise, bad water, elders nproper care of milk.
Lyker's Corners.....	Grass, hay and ensilage, Hay and grass.	"	.....	se, bad water, weeds, is.
Van Alstyne Baell.....	Hay and grass. Hay and grass.	"	.....	Yes, very little; cause, water and weeds. A little; cause, fresh clover, impure water, not cooling milk.
Waterville Frey's Bush.....	Grass, hay and grain	None.	.....	None; cause, delivered nights and cooled here.
Seebor Lane.....	Grass, hay and grain	"	.....	Yes; cause, bad water; not properly cooled and ventilated; ventilation is the most important.

Smith Creek.....	Hay and grass, some ensilage.	"	.....	None; cause, improper cooling, ventilation and feed.
Sand Hill	Hay, grass and grain	"	.....	Little this spring; cause, improper cooling, feed and water.
Orange County Milk Ass'n	Hay, grass, ensilage and grain.	"	.....	Once this summer; cause, don't know; inclined to think
Zoller	Hay, grass and grain	"	.....	Yes, lots of it; can water, unclean cooling.
Fort Willett.....	Hay and grass.	"	.....
Fair View.....	Hay and grass.	"	.....
Hallsville	Grass, hay and grain	"	.....
Brookman's Corners.....	Grass, hay and grain	"	.....
Van Dusen, E. W.....	Grass, hay and grain	"	.....
Christman, G. H.....	Grass, hay and grain	"	.....
Mother Creek.....	Grass, hay and grain	"	.....
Smith, A. & Co.....	Grass, hay and grain	"	.....
Klock & Nellis.....	Grass, hay and grain	"	.....	Some.
St. Johnsville.....	Grass, hay and grain	"	.....	Little; cause, cows milking weeds.
Fox	Grass, hay and grain	"	.....	None; cause, bad feed and improper care of milk.
Tribes Hill	Grass, hay and corn fodder.	"	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—MONTGOMERY COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Empire.....	Good.....	Good.....	Good.....	This factory was built in 1888;
Minaville	"	"	Bad	ing butcher.
Mohawk Valley Creamery.	"	"	Good.....	.....
Cayadutta	Old.....	"	Bad .....	.....
Empire Cheddar.....	"	"	"
Stone Arabia	Good.....	"	Fair.....	.....
Spraker	Old.....	"	Bad .....	.....
Mohawk	"	"	Fair.....	Appliances of the old style.
Lewis, Henry.....	"	"	Bad .....	.....
Nellis, A.....	Good.....	"	Good.....	.....
Docketader	"	"	Bad	Considerable trouble here with tainted milk; owing in a great measure to the bad drainage of and improper care
Canajoharie	"	"	Fair.....	O'Neill system is
Flat Creek	"	"	"	Falls; cheese took the first premium three years ago, and second two years ago at the State fair.
Lyker's Corners.....	"	"	"
Van Alstyne	"	"	"

Buell	There is a difference; don't know how to equalize it.	"	"	"	"
Waterville.....	None; do not know.	Fair.....	Fair.....	Fair.....	Fair.....
Frey's Bush	Do not know.	"	"	"	"
Seeber Lane	There is a difference; don't know how to adjust it.	Good.....	Good.....	Good.....	Good.....
Smith Creek	"	"	"	"	"
Sand Hill	know how to adjust.	"	"	"	"
Orange County Milk Ass'n.	adjust; don't know.	"	"	"	"
Zoller	adjust; don't know.	"	"	"	"
Port Willett.....	adjust; don't know.	"	"	"	"
Fair View	know how to adjust.	Fair.....	Fair.....	Fair.....	Fair.....
Hallsville.....	"	Good.....	Good.....	Good.....	Good.....
Brookman's Corners.....	know how to difference.	"	"	"	"
Van Dusen, E. W.....	Don't think there is any difference.	Good.....	Good.....	Good.....	Good.....
Christman, G. H.....	There is a difference, but do not know how to adjust it.	"	"	"	"
Mother Creek.....	"	"	"	"	"
Smith, A. & Co.....	"	"	"	"	"
Klock & Nellis.....	There is a difference; do not know how to adjust it.	Old.....	Old.....	Old.....	Old.....
St. Johnsville.....	"	"	"	"	"
Fox	"	Good.....	Good.....	Good.....	Good.....
Tribes Hill.....	There is a difference; do not know how to adjust it.	Good.....	Good.....	Good.....	Good.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — NIAGARA COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average price received for butter.
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.		
Ransomville Creamery	Ransomville	Oct. 18	Butter	6	61	500	.....	326	35,000	.....	22	
Wilson	Wilson	18	Cheese	5	20	150	3,000	..	.....	.....	..

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — NIAGARA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Ransomville Creamery.....	Grass, corn fodder and feed.	None.	If fed, do not think there would be any cream.	None.
Wilson	Grass, corn fodder, meal and mill feed.	"	If fed, think it would injure the texture and flavor of the cheese and make it unmarketable.	I do; cause, the patrons not properly cleaning the cans, and not thoroughly aerating and cooling the milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — NIAGARA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Ransomville Creamery	There is a difference in the cream difference in the cream standard same	Good.....	Good.....	Good.....	.....
Wilson	There is not any question	" .....	" .....	" .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONEIDA COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Tuthill, D. H.	Camden	June 12	Cheese.	6	61	600	11,350	..	..	..	..
Waterbury, O. F.	Florence	12	"	6	47	550	11,700	..	..	..	..
Chrestien, A.	Florence	12	"	6	33	400	9,500	..	..	..	..
Cornish	Florence	16	"	6	26	360	7,000	..	..	..	..
Taberg	Annaville	16	"	6	76	700	10,000	..	..	..	..
French Road.	Steuben	22	"	6	13	254	5,300	..	..	..	..
Remsen	Remsen	23	"	6	23	450	8,000	..	..	..	..
Davis, J. J., No. 1.	Cassville	26	"	6	34	400	9,348	..	..	..	..
Davis, J. J., No. 2.	Bridgewater	27	"	6	30	490	10,900	..	..	..	..
Thomas, G. D.	Floyd	30	"	6	43	730	15,000	..	..	..	..
Sessions, R. W.	Paris	30	"	6	28	472	10,890	..	..	..	..
Beaver Creek	Trenton	3	"	6	22	430	10,000	..	..	..	..
Union	Trenton	4	"	6	37	550	12,000	..	..	..	..
Remsen	Remsen	6	"	6	23	450	10,500	..	..	..	..
North Trenton	Trenton	5	"	6	38	625	14,340	..	..	..	..
Conway	Remsen	7	"	6	28	550	12,000	..	..	..	..
River Road.	Marcy	31	"	6	29	375	6,000	..	..	..	..
Mitchell Union	Remsen	18	"	6	10	250	5,700	..	..	..	..
Cold Spring	Remsen	2	"	6	24	418	9,360	..	..	..	..
Thomas, R. E.	Steuben	2	"	6	30	450	10,000	..	..	..	..
French Road.	Steuben	3	"	6	13	258	5,400	..	..	..	..
Bridgewater	Bridgewater	7	"	7	61	700	10,000	..	..	..	..
Floyd Hill.	Floyd	13	"	7	18	400	5,000	..	..	..	..
Lowell	Westmoreland.	16	"	7	53	800	16,000	..	..	..	..
Merry, G.	Verona.	17	"	7	67	800	13,600	..	..	..	..
Taberg	Annaville	18	"	6	77	750	10,000	..	..	..	..
Farmers.	Western	18	"	6	23	400	8,000	..	..	..	..
South Western	Western	20	"	6	19	325	6,000	..	..	..	..
Steuben Association	Steuben	20	"	6	38	775	..	..	..	..	..
Unicn	Trenton	21	"	6	26	550	12,000	..	..	..	..

[illegible]

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONEIDA COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Tuthill, D. H.	Full cream	59	19	110,000	10½	.....	Yes	Common.
Waterbury, C. F.	Full cream	60	19	.....	10	10.3	"	Natives.
Chrestien, A.	Full cream	66	16	130,000	10	10.5	"	Natives.
Cornish	Cheddar shape.	65	11	90,000	10	.....	"	Natives.
Taberg	Shipping	63	16	.....	10.25	.....	"	Natives.
French Road.	Shipping	58	8	.....	10	.....	"	Natives.
Remsen	Shipping	50	16	145,000	10	.....	"	.....
Davis, J. J., No. 1.	Full cream	60	15	130,000	10.15	.....	"	Grade Holsteins and natives.
Davis, J. J., No. 2.	Full cream	62	17	170,000	10.15	.....	"	Natives.
Thomas, G. D.	Shipping	60	25	200,000	9.91	.....	"	Holstein, etc.
Sessions, R. W.	Full cream	60	17	160,000	10	.....	"	Holstein, etc.
Beaver Creek	Full cream	65	14	130,000	10	.....	"	Native.
Union	Full cream	50	23	180,000	10	.....	"	Native.
Remsen	Full cream	50	20	140,000	10	.....	"	Native.
North Trenton	Full cream	57	25	199,000	10	.....	"	Native.
Conway	Full cream	50	25	147,000	10.12	.....	"	Native.
River Road.	Full cream	57	10	115,000	10	8½	"	Native.
Mitchell, Union	Full cream	65	9	70,000	9.55	.....	"	Native.
Cold Spring	Full cream	60	15	115,000	10	.....	"	Native.
Thomas, R. E.	Full cream	66	15	120,000	10	.....	"	Native.
French Road.	Full cream	58	10	70,000	10	.....	"	Native.
Bridgewater	Full cream	62	19	250,000	10½	8½	No.	Native.
Floyd Hill.	Cheddar	66	9	130,000	10	9	.....	Native.
Lowell.	Shipping	60	25	210,000	10.46	.....	.....	.....
Merry, G.	Shipping	62	22	250,000	10½	.....	.....	.....
Taberg	Shipping	63	15	200,000	10.50	.....	.....	.....
Farmers	Shipping	64	14	95,000	10	.....	Yes	Native.
South Western	Shipping	65	9	85,000	10½	8½	No.	Native.
Steuben Association	Full cream; shipping.	63	.....	220,000	9 4-5	.....	Yes	Native.
Union	Shipping	50	24	182,000	10	.....	.....	Natives, Holstein and Durham grades.
M. W. Getman	Shipping	60	.....	83,000	10.25	10.29	Yes	.....

Jackson	60	9	78,000	10.17	.....	.....	.....	Native.
Oriskany Union	63	8	100,000	10.40	8%	.....	.....	Native.
Eagle	60	13	75,000	.....	.....	.....	.....	Native.
Union	63	13	90,000	9.86	.....	.....	.....	Native.
Cornish, A.	64	11	90,000	10.26	.....	.....	.....	Native.
Fitch & Bacon	60	7	45,000	.....	.....	.....	.....	Native.
Oneida Castle	60	.....	70,000	.....	.....	.....	.....	Native.
Verona Centre	60	.....	95,000	10.25	.....	.....	.....	Native.
Muller, N. E.	60	12	80,000	10.25	.....	.....	.....	Native.
Hatcher's Corners	61	.....	140,000	10.32	.....	.....	.....	Native and grades.
West Canada Creek	36	36	.....	10.10	.....	.....	.....	Native, grades, Holsteins.
Merry's	61	32	275,000	10.25	.....	.....	.....	.....
Bathbun	60	.....	97,000	10.56	.....	.....	.....	.....
Bathburnville	60	10	150,000	10.20	.....	.....	.....	.....
Walsworth	60	.....	112,000	10.17	.....	.....	.....	.....
Delta	60	34	102,415	9.92	.....	.....	.....	Native, mixed.
Cold Spring	60	12	150,000	10.20	.....	.....	.....	Natives.
Newell, L. E.	64	.....	120,000	10.27	.....	.....	.....	Native and grades.
New London	60	18	260,000	10.40	.....	.....	.....	Native and grades.
Verona Landing	61	10	80,000	10	.....	.....	.....	Native.
Marshall	62	18	125,000	.....	.....	.....	.....	Native.
Seabrook, No. 1	64	12	80,000	14	.....	.....	.....	Common and grade.
Ridge Creamery	60	.....	100,000	.....	.....	.....	.....	.....
Rome Association	60	25	140,000	11.40	.....	.....	.....	Natives.
Eggleston, No. 13	60	9	113,000	10.10	.....	.....	.....	Natives.
Westerville	65	7	70,000	10.16	9%	.....	.....	Natives.
South Western	64	19	267,000	10.20	.....	.....	.....	Holsteins and Ayrshires.
Cream	60	8	100,000	10.20	.....	.....	.....	Holstein and natives.
Vernon and Verona	63	7	85,000	10.28	.....	.....	.....	Native and a few Holstein.
Hecla	62	6	100,000	10.25	.....	.....	.....	Natives and Holsteins.
Walesville	63	9	100,000	.....	.....	.....	.....	.....
Lawrence, N. E.	57	27	228,000	.....	.....	.....	.....	.....
Stittville Dairy Ass'n	60	.....	150,000	19.37	.....	.....	.....	Natives mostly.
Floyd Corners	36	20	184,000	.....	.....	.....	.....	.....
Button Ball	36	26	260,000	.....	.....	.....	.....	.....
Home	63	.....	.....	.....	.....	.....	.....	.....
Beaver Creek .....	.....	.....	.....	.....	.....	.....	.....	.....
Kelly Tract	24	20	145,000	.....	.....	.....	.....	.....

Light skim.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONEIDA COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Tuthill, D. H	Grass, hay and gr'in	None.	Bad flavor and follows the curd into the hoops.	Have had; cause, don't stir and cool their milk good.
Waterbury, O. F	Hay and feed.	"	.....	A collection of a substance resembling verdigris with which the milk comes in contact.
Christien, A	Hay and feed.	"	Makes the cheese smell strong and causes the cheese to be off flavor.	None; cause, uncleanness of cans and not stirring the milk well.
Cornish	Hay and grain.	"	.....	Have had.
Taber .....	.....	"	.....	Have had; cause, improper care of milk and uncleanness.
French Road .....	.....	"	.....	Have had; cause, improper care of milk and uncleanness.
Remsen	Hay, grass and feed.	"	I think it makes light milk and thus affects the ratio.	Yes; cause, not proper care as to cooling and uncleanness.
Davis, J. J., No. 1	Grass.	"	.....	Have had; cause, improper care of cans by patrons.
Davis, J. J., No. 2	Grass.	"	.....	Have had; cause, improper care of milk.
Thomas, G. D	Hay, grass and ground feed.	"	Think it does not make as good quality of milk and thus affects the ratio.	Yes; cause, not air enough; not cooled
Seasons, R. W .....	.....	"	.....	Yc milk.
Beaver Creek .....	.....	"	.....	Yc wild
Union .....	.....	"	.....	Yc milk
Remsen .....	.....	"	.....	Yc
North Trenton .....	.....	"	.....	Yc
Conway .....	.....	"	.....	Yc
River Road	Pasture.	"	.....	Yc
Mitchell, Union .....	.....	"	.....	Yc
Cold Spring .....	.....	"	.....	by patrons.
Thomas, E. E .....	.....	"	.....	Yes; cause, lack of care by patrons.
French Road .....	.....	"	.....	Yes; patrons do not take good care of milk.
.....	.....	"	.....	Yes; the patrons not taking proper care.

Bridgewater.....	Pasture.	"	Ap't to taint.	Yes; don't know.
Floyd Hill.....	Pasture.	"	Taints it.	Yes; various causes.
Lowell.....	Hay, grass and ground feed.	"	It takes more milk to make the cheese and makes cheese of inferior quality.	We have; cause, neglect in care of milk.
Merry, G.....	Hay, grass and ground feed.	"	Increases the ratio and makes the cheese off flavor.	Yes; cause, bad water and not proper care taken of utensils, etc.
Taber.....	Grass and sowed corn.	None.	.....	.....
Farmers.....	Grass.	"	Tends to sour the milk.	Little; cause, neglect by patrons.
South Western.....	Common pasturing.	None.	.....	Plenty of it; cause, the care of milk at home.
Stauben Association.....	.....	.....	.....	.....
Union.....	.....	.....	.....	.....
M. W. Getman.....	Hay, grass and ground feed.	None.	.....	.....
Jackson.....	Pasture and sowed corn.	"	.....	.....
Oriskany Union.....	Grass.	"	Taints milk.	patrons.
Eagle Union.....	.....	"	.....	Yes; cause, not proper care taken by patrons.
Cornish, A.....	Grass.	"	.....	Very little; cause, lack of care by patrons.
Fitch & Bacon.....	Meal and shorts.	"	.....	Very little; cause, thought something cows eat.
Oneida Castle.....	Hay, grass and ground feed.	"	.....	Yes; cause, lack of care by patrons and wild feed.
Vernon Centre.....	Hay, grass and ground feed.	"	It gives it a bad odor.	I have; cause, can not say for certain but think it must be impure water, or for the want of airing which is done by stirring.
Muller, N. B.....	Grass.	"	.....	Yes.
Hatcher's Corners.....	Hay, grass and ground feed.	"	Takes more milk to make a pound of cheese.	Yes; cause, not proper care of milk, bad water.
West Canada Creek.....	Hay, grass and ground feed.	"	.....	Very little; cause, patrons did not stir the milk as they should.
Merry's.....	Grass.	"	.....	Yes; cause, not taking proper care of milk.
Bathun.....	Hay, grass and mill feed.	"	.....	Cause, night's milk not properly cooled, bad water.
Bathburnville.....	.....	"	.....	Yes; cause, improper care of milk by patrons.
Walsworth.....	.....	"	.....	Yes.
Delta.....	Hay, grass and ground feed.	"	.....	.....
Cold Spring.....	Grass, hay, shorts.	"	Affects the flavor of the cheese, and also the ratio of cheese to milk.	Yes; cause, filthy cans, or milk not properly cooled and aired.
Newell, L. E.....	.....	"	.....	Yes; cause, not taking proper care of milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONEIDA COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
New London.....	.....	None.	It gives it a flat taste.	Yes; cause, cooling too quick and not proper care.
Verona Landing	Grass, grain and ground feed.	"	It affects the flavor of cheese.	Yes; different causes.
Marshall	Pasture and grain.	"	.....	on part of patrons e water.
Seasons, No. 1	Pasture.	"	.....
Ridge Creamery.....	Hay and grass.	"	.....
Rome Association.....	Hay, grass and ground feed.	"	.....
Eggleston, No. 19.....	Pasture and grain.	"	.....	I have; cause, lack of care on part of patrons.
Westernville	Hay, grass and ground feed.	"	.....	Yes; cause, not taking proper care.
South Western.....	Hay, grass and ground feed.	"	.....	.....
Cream.....	Mostly shorts.	"	Don't know.	..... or, any injury fast driving, milk, any bad ten near dead
Vernon and Verona.....	Mostly shorts.	"	.....	Yes; cause, the same as above.
Heda .....	.....	.....	.....	Yes; cause, taking odors from filthy surroundings.
Walesville.....	Hay, grass and ground feed.	None.	.....	Yes; cause, not properly cooled.
Lawrence, N. B.....	.....	None.	.....	.....
Stittville Dairy Association.....	.....	None.	.....	.....
Floyd Corners.....	.....	.....	.....	.....
Button Ball.....	.....	.....	.....	.....
Home .....	.....	.....	.....	.....
Beaver Creek.....	.....	.....	.....	.....
Kelly Tract.....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONEIDA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Tuthill, D. H.....	There is a difference, caused by upland and lowland and by the condition of the cow; if she is fat the milk is better than when poor.	Good.....	Good.....	First-class.	.....
Waterbury, C. F.....	There is a difference, resulting from the care taken by the patrons.	New.....	"	Good.....	The milk delivered at this factory was uniformly good, and the test used by the inspector was very satisfactory to the proprietor and maker.
Chrestien, A.....	There is a difference, due to the feed of the cows, to water and the age of the herd.	Good.....	Two miles from Florence village	" .....	.....
Cornish .....	.....	" .....	Four miles from Camden village	Fair	The usual inspection was made here; the lactometric standing being verified by raising the cream by the force method; the lactometers in the several factories visited seemed to vary much.
Taberg .....	.....	Favorable	Good.....	Good.....	.....
French Road.....	.....	Fair.....	One mile east of Steuben.	Fair .....	.....
Bensen .....	.....	Good.....	Good.....	Good.....	.....
Davis, J. J., No. 1.....	Think there is no difference.	"	In Sequoit valley.	" .....	.....
Davis, J. J., No. 2.....	All tries about the same, setting in glass test-tubes.	"	Good.....	Into cov'd well.	.....
Thomas, G. D.....	.....	" .....	" .....	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONEIDA COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Sessions, R. W.	Does not know any difference.	Good.....	Good.....	Good.....	.....
Beaver Creek Union	Does not know of any.	Fair.....	".....	Fair.....	.....
Remsen	Do not know of any.	Good.....	".....	Good.....	See report of inspector in regard to epidemic.
North Trenton	Do not know of any.	".....	".....	".....	.....
Conway	Do not know of any.	".....	".....	".....	.....
River Road	None.	".....	".....	".....	.....
Mitchell Union	None.	Poor.....	".....	Poor.....	Did not get his cheese firm enough, showed him how to make by the Canadian plan.
Cold Spring	Do not know of any.	Fair.....	".....	Good.....	.....
Thomas, R. E.	Do not know of any.	Good.....	".....	Fair.....	Those who handle the cheese for this factory desire the use of the State brand.
French road	Do not know of any.	Poor.....	".....	Fair.....	.....
Bridgewater	Can't tell.	Old.....	".....	".....	.....
Floyd Hill	There is none.	Good.....	".....	Good.....	.....
Lowell	Yes.	".....	".....	".....	Inspection here was highly satisfactory and the suggestion of the inspector well received and there was an evident improvement.
Merry, G.	Yes.	".....	".....	".....	.....
Taberg	Yes.	".....	".....	".....	.....
Farmers	Do not know.	Fair.....	".....	".....	.....
South Western	Do not know.	Good.....	".....	".....	.....
Stenben Association	Do not know.	Splendid.....	".....	".....	.....
Union	Do not know.	Fair.....	".....	".....	.....
M. W. Getman	Do not know.	Good.....	".....	".....	The inspector found that some loss and trouble had been occasioned by tainted milk, which upon investigation, proved to be caused by the improper care of milk and cans.

Jackson.....	Do not know of any.	"	"	"	"
Orikanany Union.....	There is a difference in the value.	Fair.....	"	"	"
Eagle.....	Do not know of any.	Good.....	"	"	"
Union	Do not know of any.	"	"	To small creek.....	"
Cornish, A	Do not know of any.	Fair.....	"	To small creek.....	"
Fitch & Bacon		Good.....	"	Good.....	"
Onelda Castle.....		"	"	"	The inspector says that with such a factory and surroundings, it is not surprising that the proprietor holds the gold cup of first prize on shipping cheese.
Verona Centre.....		"	"	"	
Muller, W. B	Do not know of any, tested milk runs very even.	"	"	"	
Hatcher's Corners.....		Poor.....	"	Ordinary.....	
West Canada Creek		Good.....	"	Good.....	
Merry's... ..	Do not know of any.	First-class.	One-half mile from Verona Station....	"	The ratio of cheese to milk obtained by usual method employed; certificates given to patrons.
Bathbun		Good.....	Good.....	"	Inspection made and certificates given; lactometer used here was not standard, being 13 degrees
Bathburnville		"	"	"	1 in testing
Walsworth		Poor.....	"	"	A mixture of Verona method, 80 percent water added at temperature of 88 degrees.
Delta		"	"	"	
Cold Spring.....		Good.....	Good.....	Good.....	
Newell, L. E.		"	"	"	
New London.....		"	"	"	
Verona Landing.....		"	"	"	
Marshall Sessions, No. 1.....	I do not know of any difference.	Fair.....	Fair.....	"	or pounds of cheese.
Ridge Creamery.....		Good.....	Good.....	First-class Good.....	Information and microscope, and also was need to satisfy maker; he has a worker with him id has a new system.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONIDA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Rome Association	Good	Good	Good	The milk delivered here was of
Eastleton, No. 12	I do not know.	First-class.	"	"	scope, and also having a peculiar odor.
Westerville	Poor	"	Poor .....	.....
South Western	Good	"	Good	Found the milk here in good quality and good condition; but little care seemed to be observed by patrons straining their
Cream	"	"	"
Vernon and Verona	"	"	"
Hecola	"	"	"
Walesville	"	"	"
Lawrence, N. B.	"	"	"	Complaints made; that the State brand is used on night skimming cheese by leaving out the word <i>Full</i> .

[illegible]

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONONDAGA COUNTY — (Continued).

NAME OF FACTORY.	TOWN.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.
.....	Manlius	Aug. 16	Cheese.....	6	76	300	5,000	86	20,400	40	23%
.....	Pompey	Sept. 20	Butter and cheese.....	6	17	100	3,500	86	20,400	40	23%
.....	Pompey	Sept. 20	Cheese.....	7	9	100	3,500	86	20,400	40	23%
.....	Pompey	Sept. 20	Butter and cheese.....	8	11	200	4,000	160	40,000	38	22
.....	Pompey	Sept. 21	Cheese.....	6	28	300	4,000	160	40,000	38	22
.....	Pompey	Sept. 21	"	6	32	400	5,000	160	40,000	38	22
.....	Pompey	Sept. 21	"	6	23	200	2,500	160	40,000	38	22
.....	Cicero	Sept. 25	"	6	20	200	2,500	160	40,000	38	22
.....	Cicero	Sept. 25	"	6	38	850	6,000	160	40,000	38	22
.....	Cicero	Sept. 25	"	6	11	140	2,000	160	40,000	38	22
.....	Cicero	Sept. 26	"	7	21	325	6,500	160	40,000	38	22

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONONDAGA COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Gregg	Full cream	60	6	100,000	10	9	Natives.
Delphi Creamery Co.	Skimmed.	50	6	72,000	12½	6	Natives.
Pleasant Valley	Full cream	50	7	73,500	10½	8½	Natives.
Pompey Hollow Cream'ry ..	Skim.	43	8	75,000	15	4	Natives and Holsteins.
Pompey Block	Full cream	55	6	50,000	9	8½	Natives.
Pompey Centre	Full cream	60	10	110,000	10	8½	Natives.
Pompey Star	Full cream	50	6	60,000	9½	8½	Natives.
Granger	Full cream	55	5	41,250	10½	8½	Natives.
Cicero	Soft	57	10	115,000	10½	8½	Natives.
Van Bramer	Cheddar.	67	3	37,000	10.20	8½	Natives and Holstein.
Loomis	Full cream	55	12	138,600	10½	9½	Natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONONDAGA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effects of feeding whey, on milk.	With regard to tainted milk and the cause of the same.
Gregg.....	Pasture.	None.	Taints milk.	Yes; cause, not proper care taken by patrons.
Delphi Creamery.....	Pasture.	"	Can not say.	None.
Pleasant Valley.....	Pasture.	"	Taints milk.	None.
Pompey Hollow Creamery.	Pasture.	"	Don't know.	Yes; cause, don't know.
Pompey Block.....	Pasture.	"		Yes; cause, can not tell.
Pompey Centre.....	Pasture.	"		None.
Pompey star.....	Pasture.	"		
Granger.....	Pasture.	"	I can not say.	
Cicero.....	Pasture.	"		
Van Bramer.....	Grass.	"		
Loomis.....	Pasture.	"		close to barn in stirring properly.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONONDAGA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Gregg	None.	Good.....	Good.....	Good.....	.....
Delphi Creamery Company .....		" .....	" .....	" .....	.....
Pleasant Valley .....		" .....	" .....	" .....	.....
Pompey Hollow Creamery		Poor	Three mil's west of Delphi.	None .....	.....
Pompey Block.....	None.	.....	.....	Poor .....	.....
Pompey Centre.....	.....	Good.....	.....	Good.....	.....
Pompey Star.....		" .....	.....	" .....	.....
Granger.....		"	North Syracuse.	" .....	.....
Cicero.....	None. Certainly there is a difference. None.	"	Cicero .....	" .....	.....
Van Bramer		"	Good.....	" .....	.....
Loomis.....		"	Cicero .....	" .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONTARIO COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Number of pounds of butter made daily.	Butter.			
									Estimated amount of butter made dur- ing the season.	Number of pounds of milk required for a pound of butter.	Average price re- ceived for butter.	
Stanley Creamery.....	Seneca.....	Oct. 16	Butter.....	7	70	300	.....	200	60,000	.....	23	
.....	Victor.....	16	".....	8	40	200	200	300	40,000	22	24½	
.....	Manchester.....	17	".....	12	12	180	740	26	8,000	.....	25	
.....	Port Gibson.....	17	".....	6	100	800	1,300	325	70,000	.....	25	
.....	Naples.....	17	Cheese.....	5	10	160	900	.....	.....	.....	.....

* Cream.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONTARIO COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Cheese.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Stanley Creamery.....	.....	.....	.....	.....	.....	.....	Natives, Holstein and Durham. d Holstein Jerseys.
	
	White full cream . . .	60	3	27,000	10	9 1/2	
						Do you favor State brand?	
						Yes...	
						Yes...	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ONTARIO COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Stanley Creamery	Sowed corn, bran, meal and middlings	None.	Do not know what effect the feeding of sour milk or whey would have on milk; never worked any.	None.
Victor Creamery	Grass, bran, some meal.	"	I can not tell how it would effect the milk.	Cause, driving cows fast, or not properly cleansing and airing cans in case tainted
Sanitarium Creamery	Grass, ensilage, out stalks and Pomfret	"	I don't know what effect it would have on the milk.	at irregular, or not dipping when left in could cause it
Crystal Springs	Grass, corn fodder, bran and meal.	"	Don't know; I have never had any experience with such milk.	.....
Naples	Sowed corn, meal, bran and middlings	"	It would be poor quality; make bad-flavored cheese.	None.

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1898 — ONTARIO COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Stanley Creamery.....	No milk brought to this creamery.	Good.....	Good.....	Good.....	Factory an extensive plant.
Victor Creamery.....	(See remarks.)	Excellent..	First-class.	"	
Sanitarium Creamery.....		Good.....	Poor	"	butter-milk and butter is used entirely and solely by the Sanitarium.
Crystal Springs.....	I think there is a difference in the quality and value of the cream obtained from the different patrons; the only way of equalizing and adjusting it is to find the per cent of oil in each patron's cream by the oil test.	"	First-class.	"	
Naples.....	Milk delivered to this factory runs so even that it would not be advisable to raise any question as regards the quality.	"	"	"	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ORLEANS COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Tuttle	Holley	Oct. 24	Cheese	6	14	152	886	142	40,750	26	22
Knowlesville.....	Ridgeway	26	Butter	12	26	214	.....			

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ORLEANS COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Tuttle	Full cream	40	6	37,482	10	10%	Yes...	Native, mixed Holstein and Jerseys.
Knowlesville .....	.....	.....	....	.....	.....	.....	.....	Holstein, mixed breeds.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ORLEANS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey on milk.	With regard to tainted milk and the causes of the same.
Tuttle.....	Grass.	None.	If fed, it would have a very bad effect upon grade and keeping.	None.
Knowlesville.....	Grass, corn fodder.	"	It would produce very little cream or	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ORLEANS COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Tuttle		Good.....	Good.....	Good.....	.....
Knowlesville	Have tested the milk occasionally, but find it not think are as our received it can be urn, and ce in two	" .....	" .....	" .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—OSWEGO COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Bottle Island	Volney	July 6	Cheese	5	28	300	6,700	...	...	...	...
North Road	Scriba	10	Butter and cheese	6	55	350	7,000	...	...	...	...
Hannibal Butter and Cheese	Hannibal	12	Cheese	5	60	600	8,500	125	16,500	...	...
Phoenix	Scruple	13	Butter and cheese	6	62	600	18,000	...	...	...	...
Stowell, O. P.	Sandy Creek	27	"	6	27	300	6,500	...	...	...	...
Finster, J. E.	Sandy Creek	28	"	6	48	800	11,500	...	...	...	...
North Road	Scriba	18	"	6	55	325	6,000	...	...	...	...
New Haven	New Haven	22	"	6	82	975	12,000	...	...	...	...
Granby Centre	Granby	23	"	6	40	350	75,000	...	...	...	...
Bowen's Corners	Granby	28	Butter and cheese	6	60	600	8,000	...	...	...	...
South Granby	Granby	28	Butter and cheese	6	83	650	10,000	120	16,000	100	19
Oram, H. J.	Williamstown	6	Cheese	6	65	600	12,500	...	...	...	...
Palermo Centre	Palermo	7	Butter and cheese	6	105	750	11,327	100	20,000	...	20
Pulaski	Richland	7	Cheese	6	70	1,000	13,000	...	...	...	...
Empire	Mexico	2	Butter and cheese	6	60	570	9,500	56	10,000	...	20
Castor	Richland	5	Cheese	6	44	850	12,500	...	...	...	...
Dewey	Mexico	6	Butter and cheese	6	33	300	8,000	...	...	...	...
Farmers	Mexico	9	Butter and cheese	6	55	400	11,000	60	10,000	...	20
Salsbury	Sandy Creek	10	Cheese	6	50	850	14,000	...	...	...	...
Schroepel	Schroepel	12	"	6	31	210	7,000	...	...	...	...
White Clover	Palermo	18	"	6	47	400	17,000	...	...	...	...
Eagle	New Haven	19	"	6	29	350	...	...	...	...	...
Pennellville	Scruple	23	"	6	44	400	10,000	...	...	...	...
Central Square	Hastings	24	"	6	48	375	8,500	...	...	...	...
West Monroe	West Monroe	25	"	6	54	500	9,900	...	...	...	...
Onelda	Hastings	26	"	6	50	500	9,000	...	...	...	...
New Floid	Orwell	30	"	6	19	300	7,000	...	...	...	...
Olmstead, A. E.	Orwell	30	"	6	25	400	8,000	...	...	...	...
Moline	Orwell	31	"	6	25	400	8,400	...	...	...	...
Loomis, G. S.	Orwell	31	"	6	20	300	7,000	...	...	...	...

Parish.....	Parish.....	Nov.	13	"	.....	6	62	500	13,000	...	.....	.....
Parish Centre.....	Parish.....		13	"	.....	6	40	300	5,000	...	.....	.....
Howardville.....	Albion.....		14	"	.....	6	26	200	3,900	...	.....	.....
Dugway.....	Albion.....		14	"	.....	6	35	300	7,000	...	.....	.....
Reeds.....	Albion.....		14	"	.....	4½	22	250	5,000	...	.....	.....
Orleton.....	Albion.....		14	"	.....	6	24	200	3,569	...	.....	.....
Albion Centre.....	Albion.....		14	"	.....	6	26	175	3,000	...	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OSWEGO COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	Cheese.				Breed of cows.
			Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State?		
Bottle Island	Full cream	67	10½	8½	No ..	Native and Holstein.	I.
North Road	Full cream	55	10 1-5	8½	Yes...		
Hannibal Butter & Cheese	Full cream; white	60	10	8½	Yes...		
Phoenix	Full cream	68	10.36	8½	Yes...		
Stowell, O. P.	Shipping	68	.....	.....	.....
Finster, J. E.	American Cheddar	73	.....	.....	No ..
North Road	Full cream	55	10.40	.....	Yes...	
New Haven	Full cream	60	10½	8½	Yes...		
Granby Centre	Full cream	58	10½	9	Yes...		
Bowen's Corners	Full cream	60	10	8½	No ..		
South Granby	Skimmed	60	10½	8½	Yes...	Native and Holstein.	M.
Oram, H. J.	Full cream	64	10	.....	Yes...	
Palermo Centre	English market	60	10.60	6	No ..		
Pulaski	Full cream	71	10½	8½	Yes...		
Empire	Skim	58	11	8	No ..		
Castor	Full cream	67	10.20	.....	Yes...	
Dewey	Full cream	68	10	.....	Yes...	
Farmers	Skim	60	10	6	No ..		
Salebury	Full cream	66	10½	.....	Yes...	
Schroppel	Full cream	60	10½	.....	Yes...	
White Clover	Full cream	63	10½	9	Yes...	Native and Holstein.	M.
Eagle	Full cream	60	10½	9	Yes...		
Pennelville	Full cream	63	10.25	9	No ..		
Central Square	Full cream	62	10½	9	Yes...		
West Monroe	Full cream	60	10½	9	Yes...		
Onelda	Full cream	62	10.35	9	Yes...		
New Field	Colored; full cream	66	10½	10	Yes...		
Olmstead, A. E.	Colored; full cream	73	10½	9½	Yes...		
Moline	Colored; full cream	61	10½	9½	Yes...		
Loomis, G. S.	Colored; full cream	60	10.36	9½	Yes...		

Parish	Full cream	55	21	150,000	9½	9½	"	...	Natives.
Parish Centre	Full cream	65	10	75,000	10	9½	"	...	Natives.
Howardville	Full cream	63	6	40,000	10	9½	"	...	Natives.
Dugway	Full cream	65	11	90,000	10½	9	"	...	Natives.
Reeds	Full cream	36	10	30,000	10¼	9	"	...	Natives.
Carleton	Colored Cheddar; full cream.	59	6	44,250	10.20	7½	"	...	Natives.
Albion Centre	Full cream	60	7	.....	10	9½	"	...	Natives.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OSWEGO COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Bottle Island	Pasturage.	None.	.....	Yes; cause, neglect of properly cleaning and scalding the cans.
North Road	Pasturage.	"	.....	Yes; cause, offensive odor near the can where it is kept over night.
Hannibal Butter & Cheese.	Pasturage.	"	.....	Yes; cause, lack of care in cooling the night's milk at the farm, after leaving the milk near where there is some smell.
Phoenix	Pasturage and mill feed.	"	.....	Yes; not taking care of
Stowell, O. P.	Pasture and corn fodder.	"	.....	ed of cows and poor
Finster, J. E.	Grass.	"	.....	lagrant water, eating wa, and uncleanness
North Road	Pasture.	"	.....	Yes.
New Haven	Pasture.	"	.....	Yes; don't know.
Granby Centre	Pasturage.	"	.....	Yes; cause, not taking care of it.
Bowen's Corners	Pasturage & shorts.	"	.....	Yes; cause, improper care.
South Granby	Pasturage and sowed corn.	"	.....	Yes; cause, not taking proper care.
Oram, H. J.	Grass.	"	.....	Yes; cause, wild feed in some cases, patrons not taking proper care.
Palermo Centre	Grass.	"	.....	None.
Pulaski	Pasturage and sowed corn.	"	.....	Yes, very little; cause, neglect of the milk.
Empire	Pasturage.	"	.....	Yes;
Castor	Pasturage.	"	.....	Yes;
Dewey	Pasturage.	None.	.....	Yes;
Farmers	Pasturage.	"	.....	Yes;
Balsbury	Pasturage.	"	.....	Yes;
Schroppel	Pasturage.	"	.....	Yes; and care
White Clover	Pasturage.	"	.....	of the milk.
		"	.....	Yes; cause, not taking good care of the milk.

Eagle	Pasturage.	"	.....	Yes; cause, neglect.	
Pennelville	Pasturage.	"	.....	Yes; cause, neglect of care by patrons.	
Central Square	Pasturage.	"	.....	Yes; neglect of the patrons.	be milk
West Monroe	Pasturage.	"	.....		account
Onelds	Pasturage.	"	.....		things.
New Field	Pasturage.	Yes...	i think it taints the milk.		ire and
Olmstead, A. E.	Pasturage.	None.	.....		eed the
Moline	Pasturage.	Yes...	Don't seem to affect it, they feed so little.		milk.
Loomis, G. S.	Pasturage.	None.	.....	
Parish	Pasturage.	"	.....	
Parish Centre	Pasturage.	"	.....	
Howardville	Pasturage.	"	.....	
Dugway	Pasturage.	None.	.....	very true.	
Reed's	Pasturage.	"	.....	Yes; cause, neglect	
Carleton	Hay, grass, sowed	"	.....	Yes; "dirty cans and neglect to	
	corn and ensilage.	"	.....	Yes; milk.	
Albion Centre	Pasturage.	"	.....	Yes; stables and weeds.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—OSWEGO COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Bottle Island	I hardly know how it is in a cheese factory.	Good.....	Very good.....	Good.....	.....
North Road	I do not know.	".....	".....	".....	.....
Hannibal Butter & Cheese	I could not answer, except I think the richer the milk the more cheese.	".....	".....	".....	.....
Phoenix .....	.....	Fair.....	".....	Fair.....	The work of the inspector gave general satisfaction and the people seemed to be pleased with the department.
Stowell .....	.....	.....	.....	.....	.....
Finster, J. E.	There is a difference; know of no way to adjust it unless by use of some invention to tell the solids in each patron's milk at sight, the dividend be made accordingly.	Good.....	".....	Good.....	.....
North Road .....	.....	".....	".....	".....	.....
New Haven .....	.....	".....	".....	".....	.....
Granby Centre .....	.....	".....	".....	".....	.....
Bowen's Corners .....	.....	".....	".....	".....	.....
South Granby .....	.....	".....	Fair.....	".....	.....
Oram, H. J.	Don't know of any.	".....	Good.....	".....	.....
Palermo Centre .....	.....	".....	".....	".....	.....
Pulaski .....	.....	".....	".....	Fine.....	.....
Empire .....	.....	Fair.....	".....	Poor.....	.....
Castor .....	.....	Good.....	".....	Good.....	.....
Dewey .....	.....	".....	".....	".....	.....
Farmers .....	.....	Fair.....	Fair.....	".....	.....
Salisbury .....	.....	Good.....	Good.....	".....	.....
Schrotoppel .....	.....	".....	".....	".....	.....
White Clover .....	.....	".....	".....	".....	.....
Eagle .....	.....	".....	".....	".....	.....
Pennelville	Yes; I think when cows fever their milk in flush of feed.	".....	".....	.....	.....
Central Square .....	.....	".....	Very good.....	Good.....	.....
West Monroe .....	.....	Good.....	Good.....	Good.....	.....
Oneida .....	.....	.....	.....	.....	.....

New Field.....	"	"	"
Olmstead, A. E.	"	"	"
Moline	"	"	"
Loomis, G. S.	"	"	"
Pariah.....	"	"	"
Parish Centre	"	"	"
Howardville	"	"	"
Dugway	"	"	"
Reeds	"	"	"
Carleton.....	"	"	Excellent..
Albion Centre.....	"	"	Good.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OTAGO COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Richfield	Richfield	June 9	Cheese	8	17	225	8,500	...	...	...	...
Richfield	Richfield	June 9	Butter	7	18	240	4,000	...	...	...	...
Otago	Otago	Aug. 13	Butter	6	33	450	8,700	800	66,000	28	20½
Otago	Otago	Aug. 14	Butter	6	8	113	1,700	30	14,400	28	20½
Unadilla	Unadilla	Aug. 15	Butter and cheese	6	46	600	7,000	140	27,000	40	21
Otago	Otago	Aug. 16	Butter	6	30	270	4,000	200	25,000	32	26
Otago	Otago	Aug. 17	Butter	6	45	360	6,000	300	43,000	28	26
Richfield	Richfield	Aug. 30	Cheese	8	10	200	2,721	...	...	...	...
Richfield	Richfield	Aug. 30	"	7	26	400	6,000	...	...	...	...
Richfield	Richfield	Aug. 31	"	6	26	360	7,000	...	...	...	...
Springfield	Springfield	Aug. 31	"	6	14	130	2,000	...	...	...	...
Otago	Otago	Sept. 31	"	6	23	310	4,800	...	...	...	...
Otago	Otago	Sept. 1	"	6½	8	...	1,900	...	...	...	...
Richfield	Richfield	Sept. 1	"	8	14	935	5,000	...	...	...	...
Richfield	Richfield	Sept. 4	"	8	18	325	5,000	...	...	...	...
Richfield	Richfield	Sept. 4	"	8	24	476	6,400	...	...	...	...
West Exeter	West Exeter	Sept. 6	"	8	255	...	3,898	...	...	...	...
Exeter	Exeter	Sept. 6	"	7	16	...	...	...	...	...	...
Plainfield	Plainfield	Sept. 6	"	9	17	360	6,200	...	...	...	...
Springfield	Springfield	Sept. 7	Butter and cheese	7	37	451	7,000	200	45,000	70	26
Cherry Valley	Cherry Valley	Sept. 7	Cheese	5½	22	260	4,200	...	...	...	...
Springfield	Springfield	Sept. 8	Butter and cheese	7	21	260	4,600	151	28,602	31	26
Springfield	Springfield	Sept. 9	"	7½	25	399	6,900	229	53,857	30	...
West Edmeston	West Edmeston	Sept. 10	"	8	22	438	8,025	176	126,850	45	24
Burlington	Burlington	Sept. 10	Cheese	7	34	450	7,758	...	...	...	...
Edmeston	Edmeston	Sept. 11	"	6	31	226	3,400	...	...	...	...
Otago	Otago	Sept. 11	"	6	17	200	2,600	...	...	...	...
Plainfield	Plainfield	Sept. 11	Butter and cheese	6	8	153	2,860	65	12,750	43½	24
Pittsfield	Pittsfield	Sept. 12	"	6	24	310	5,360	120	25,800	38½	24
Edmeston	Edmeston	Sept. 13	Butter and cheese	6	16	...	5,000	150	22,930	40	26
Edmeston	Edmeston	Sept. 13	Cheese	6	18	...	2,716	...	...	...	...

Edmeston	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	12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ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OTSEGO COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Brighton	Full cream	40	10	75,000	10	.....	Native.
	Full cream; h'me trade	50	11	80,000	10	.....	Native.
	Light skim.	36	15	130,000	12½	7	Native.
	Full cream	40	9	54,700	10	.....	Native and Jerseys.
	Full cream; h'me trade	40	15	120,000	10	.....	Native, crossed with all kinds.
	Home trade	40	17	100,000	10	6½	Native.
	Full cream	46	4	38,000	10½	.....	Native.
	Full cream	42	13	76,000	10	6½	Native.
	Full cream	42	8	110,000	10½	.....	Native and all kinds.
	Full cream	46	12	100,000	11	8½	Native and all kinds.
	Full cream	38	18	160,000	10½	.....	Holsteins and natives.
	Full cream	38	11	69,300	10	8½	Native.
	Full cream	36	17	140,000	10 1-5	10½	Native and all kinds.
	Light skim	40	15	138,000	10	7½	Native and all kinds.
	Full cream	45	8½	83,192	11½	8½	Native and all kinds.
	Skimmed	45	7½	86,633	13½	5	Native.
	Skimmed	40	11½	107,180	14	.....	Native and all kinds.
	Skimmed	44	15	120,740	14	6	Native and all kinds.
	Full cream	37	21½	184,672	10½	9	Native and all kinds.
	Full cream	38	9	57,114	10	9½	Native and all kinds.
	Full cream	44	8	.....	10½	4½	Native and all kinds.
	Skimmed	35	5½	36,021	15	6	Native and all kinds.
	Skimmed	42	10½	93,933	12	6	Native and all kinds.
	Skimmed	40	9	67,760	11	8	Native and all kinds.
	Full cream	60	6½	64,006	10	3½	Native and all kinds.
	Full cream	86	23½	179,000	.....	.....	Native and all kinds.

English full cream	20	20	72,000	9	10	Jerseys and Holstein.
Full cream	49	7	50,000	10	13%	Natives.
Rectan'lar full cream	10	28	43,100	10	8%	Natives, etc.
Full cream	50	5	4,000	10	8%	Natives.
Full cream	47	6	54,000	10%	8%	Natives.
English full cream	20	28	84,000	10	.....	Natives.
English full cream	10	28	76,000	10	.....	Natives.
Skim	40	15	21,000	7	6	Native and Holstein.
Night skim	41	11	94,700	12	6	Natives.
Skim	40	7	50,000	14	4%	Natives.
Night skim	50	20	20,000	12%	7	Natives.
Night skim	45	4	32,000	12%	6%	Natives.
Night skim	50	9	90,000	12%	6%	Native and Jerseys.
Skimmed	57	13%	158,107	12%	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—Ottawa County—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Brighton.....	Hay, grass and ground feed.	A few.	I think it requires more milk to make a pound of cheese, when used without grain or feed other than hay.	I have; cause, I think in my experience it has been mainly due to lack of cleanliness on the part of some of the patrons.
Schuyler's Lake.....	Grass, sowed corn and millet.	None.	.....	None.
.....	Grass.	None.	.....	.....
.....	Grass.	"	.....	I have; cause, from sour cans.
.....	Grass.	"	.....	I have; cause, by uncleanness.
.....	Grass.	"	.....	None.
.....	Grass.	"	.....	None.
.....	Grass.	"	.....	Yes; cause, by the patrons not taking sufficient care of the milk after it is put in the cans, and it is drawn to the factory only once a day.
C. C. Brookway, No. 1.....	Grass, sowed corn, wheat shorts and meal.	"	.....	Yes; cause, don't know.
Pay.....	Grass and sowed corn.	"	.....	I have.
Oakville.....	Grass and sowed corn.	"	.....	I have.
Kinney.....	Grass, sowed corn and wheat bran.	"	.....	None.
Hyder.....	Grass, sowed corn and wheat bran.	"	.....	Yes; cause, by the patrons not taking proper care of the milk during the hot weather.
Eggleston, O. E., No. 2.....	Wheat middlings, grass barley.	"	.....	I have; cause, neglect of taking care of it.
Hyder, No. 3.....	Grass.	"	.....	I have; cause, feeding whey and water and lack of care.
Eggleston, No. 3.....	Grass and wheat short.	Yes ..	It taints the milk.	Yes; cause, feeding whey and not taking proper care of cans.
Pleasant Valley.....	Grass, sowed corn and wheat bran.	None.	.....	Yes; cause, by patrons not taking proper care of the milk after putting in the cans.

Eggleston & McLaughlin..	Grass, sowed corn and wheat bran.	"	.....	I have; various causes.
East Springfield Creamery.	Grass, sowed corn.	"	.....	Yes; cause, foul feed and overheating cans.
Cherry Valley.....	Grass, sowed corn.	"	.....	Cause, improper care of milk.
Springfield	Grass, sowed corn and grain.	"	.....	None.
Cold Spring Creamery.....	Grass, sowed corn and grain.	"	.....	None.
Eagle Creamery.....	Grass, sowed corn and shorts.	"	.....	Yes; cause, I don't know.
Eggleston, No. 4.....	Grass sowed corn, shorts and grits.	"	.....	Yes; cause, I believe the patrons that pasture on the lowlands, their grass not being as those on the uplands since the hot weather.
Eggleston, No. 5.....	Grass, sowed corn shorts and grits.	"	.....	None.
German.....	Grass, sowed corn.	"	.....	None.
Eagle Creamery, No. 2	Grass, sowed corn and grain.	"	.....	None.
Pittsfield Creamery.....	Grass, sowed corn middl'gs and meal	"	.....	None.
Hawkins.....	Grass, sowed corn, shorts and corn meal.	"	.....	None.
Taylor Hill	Grass, sowed corn and grain.	"	.....	None.
Edmeston	Grass, sowed corn and wheat bran.	"	.....	None.
Hyde Park.....	Grass, sowed corn.	"	.....	Yes; cause, neglect and feed.
Mason	Grass, sowed corn.	"	.....	None.
Holdredge	Grass, sowed corn.	"	.....	None.
Millford.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Sponenbergb, W. H.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Gilbertsville.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Dimmock Hollow	Grass, sowed corn and wheat shorts.	"	.....	Yes; cause, not taking proper care of milk.
Highland Creamery	Grass, corn and wheat bran.	"	.....	None.
Maple Grove Creamery.....	Grass, sowed corn.	"	.....	None.
Hillington Creamery.....	Grass, sowed corn.	"	.....	None.
York & Brown.....	Grass, sowed corn.	"	.....	None.
Shaw	Grass.	"	.....	None.
York & Brown.....	Grass, sowed corn and bran.	"	.....	Yes; cause, don't know.
Edmeston, South	Grass, sowed corn, shorts and corn meal.	"	.....	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — Oswego County — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Bottle Island	I	Good.....	Very good.....	Good.....	.....
North Road	I	".....	Good.....	".....	.....
Hannibal Butter & Cheese	I	".....	".....	".....	.....
Phoenix	I	".....	".....	".....	.....
Stowell .....	.....	Fair.....	".....	Fair.....	..... T gave people with
Finster, J. E.	There is a difference; know of no way to adjust it unless by use of some invention to tell the solids in each patron's milk at sight, the dividend be made accordingly.	Good.....	".....	Good.....	.....
North Road .....	.....	".....	".....	".....	.....
New Haven .....	.....	".....	".....	".....	.....
Granby Centre .....	.....	".....	".....	".....	.....
Bowen's Corners .....	.....	".....	".....	".....	.....
South Granby .....	.....	".....	Fair.....	".....	.....
Oram, H. J.	Don't know of any.	".....	Good.....	".....	.....
Palermo Centre .....	.....	".....	".....	".....	.....
Pulaski .....	.....	".....	".....	".....	.....
Empire .....	.....	Fair.....	".....	Fine.....	.....
Castor .....	.....	Good.....	".....	Poor.....	.....
Dewey .....	.....	".....	".....	Good.....	.....
Farmers .....	.....	Fair.....	Fair.....	".....	.....
Salesbury .....	.....	Good.....	Good.....	".....	.....
Schroepfel .....	.....	".....	".....	".....	.....
White Clover .....	.....	".....	".....	".....	.....
Eagle .....	.....	".....	".....	".....	.....
Pennelville	Yes; I think when cows fever their milk is full of feed.	".....	".....	".....	.....
Central Square .....	.....	".....	Very good.....	Good.....	.....
West Monroe .....	.....	Good.....	Good.....	Good.....	.....
Oneida .....	.....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OTSEGO COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Brighton.....	Richfield.....	June 8	Cheese.....	8	17	225	3,500	...	...	...	...
Schuyler's Lake.....	Richfield.....	9	".....	7	16	240	4,000	...	...	...	...
Otego.....	Otego.....	Aug. 13	Butter.....	6	39	450	5,700	300	56,000	28	30½
Union.....	Otego.....	14	".....	6	8	113	1,700	80	14,400	28	30½
Unadilla.....	Unadilla.....	15	Butter and cheese.....	6	45	500	7,000	140	27,000	40	31
Otego.....	Otego.....	16	Butter.....	9	30	270	4,000	200	26,000	32	26
Richfield.....	Otego.....	17	".....	6	45	360	6,000	300	43,000	28	28
Richfield.....	Richfield.....	30	Cheese.....	8	10	200	2,721	...	...	...	...
Richfield.....	Richfield.....	30	".....	7	28	400	6,000	...	...	...	...
Springfield.....	Springfield.....	31	".....	8	28	350	7,000	...	...	...	...
Otego.....	Otego.....	31	".....	8	14	130	2,000	...	...	...	...
Otego.....	Otego.....	31	".....	8	23	310	4,850	...	...	...	...
Richfield.....	Richfield.....	Sept. 1	".....	6½	8	...	1,900	...	...	...	...
Richfield.....	Richfield.....	1	".....	8	14	...	5,000	...	...	...	...
Richfield.....	Richfield.....	4	".....	8	18	326	3,000	...	...	...	...
West Exeter.....	West Exeter.....	5	".....	8	24	476	6,400	...	...	...	...
Exeter.....	Exeter.....	6	".....	7	16	255	3,898	...	...	...	...
Plainfield.....	Plainfield.....	6	".....	6	17	380	6,200	...	...	...	...
Springfield.....	Springfield.....	7	Butter and cheese.....	7	27	452	7,000	200	45,000	70	25
Cherry Valley.....	Cherry Valley.....	7	Cheese.....	6½	22	260	4,200	...	...	...	...
Springfield.....	Springfield.....	8	Butter and cheese.....	7	31	260	4,600	161	28,602	31	25
Springfield.....	Springfield.....	9	".....	7½	35	389	6,800	228	33,387	30	...
West Edmeston.....	West Edmeston.....	10	".....	6	23	483	8,025	175	126,850	48	24
Burlington.....	Burlington.....	10	Cheese.....	7	34	450	7,758	...	...	...	...
Edmeston.....	Edmeston.....	11	".....	6	21	256	3,400	...	...	...	...
Otego.....	Otego.....	11	".....	6	17	200	2,500	...	...	...	...
Plainfield.....	Plainfield.....	11	Butter and cheese.....	6	8	163	2,850	88	13,760	43½	24
Pittsfield.....	Pittsfield.....	12	".....	6	24	310	3,360	120	26,800	35½	24
Edmeston.....	Edmeston.....	13	Butter and cheese.....	6	18	...	5,000	120	22,900	40	28
Edmeston.....	Edmeston.....	13	Cheese.....	6	18	169	2,776	...	...	...	...

Edmeston	Edmeston	13	"	"	6	42	500	8,600	...	...	...	...	...
Hyde Park	Hartwick	13	English cheese.....	...	6	19	367	5,000	...	...	...	...	...
Mason	Hartwick	14	Cheese.....	...	6	20	200	3,000	...	...	...	...	...
Holdredge	Burlington	15	"	...	6	14	225	3,550	...	...	...	...	...
Millford	Millford	18	"	...	6	12	240	3,000	...	...	...	...	...
Sponenbergh, W. H.	Otego	19	"	...	6	16	200	2,500	...	...	...	...	...
Gilbertsville	Butternuts	20	"	...	6	20	400	6,000	...	...	...	...	...
Dimmock Hollow	Morris	21	"	...	6	35	366	7,000	...	...	...	...	...
Highland Creamery	Butternuts	22	Butter and cheese .....	...	6	28	400	7,500	200	21,000	...	...	23
Maple Grove Creamery	Butternuts	26	"	...	6	22	375	5,500	165	34,500	42	...	23
Hillington Creamery	Butternuts	27	"	...	6	13	250	3,500	130	22,700	30	...	21
York & Brown	Unadilla.....	28	"	...	6	57	770	14,000	350	70,000	40	...	22
Shaw	Butternuts	29	"	...	6	14	175	2,000	60	10,800	50	...	20
York & Brown	Unadilla.....	3	"	...	6 1/2	38	450	6,850	200	39,000	33	...	24
Edmeston, South.....	Edmeston	12	"	...	7	34	450	9,524	175	39,025	37 1/2	...	.....

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 — OTTAWA COUNTY — (Continued).

Name of factory	Average weight of cheese.	Cheese					Breed of cows.
		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Brighton	40	10	75,000	10	.....	Yes	Native.
Schuyler's Lake	50	11	80,000	10	.....	.....	Native.
Otego	.....	.....	.....	.....	.....	.....	Native.
Junction Creamery	.....	.....	.....	.....	.....	.....	Native.
Well's Bridge	35	15	120,000	12½	7	No	Native.
Osdawa	.....	.....	.....	.....	.....	.....	Native and Jerseys.
Silver Spring Creamery	.....	.....	.....	.....	.....	.....	Native, crossed with all kinds.
Willow Valley	40	9	54,700	10	.....	No	Native.
C. C. Brookway, No. 1	40	15	120,000	10	6½	Yes	Native.
Pay	40	17	100,000	.....	.....	.....	Native.
Galveston	46	4	38,000	10½	.....	Yes	Native.
.....	42	12	76,000	10	8½	.....	Native and all kinds.
.....	42	6½	.....	10	.....	.....	Native and all kinds.
.....	42	8	110,000	10½	.....	.....	Holsteins and natives.
.....	46	12	200,000	21	.....	.....	Native.
.....	38	18	180,000	10½	.....	.....	Native and all kinds.
.....	38	11	69,388	10	.....	No	Native and all kinds.
.....	35	17	140,000	10 1-8	10½	Yes	Native and all kinds.
.....	40	15	138,000	10	7½	.....	Native.
.....	45	8½	63,192	11½	8½	.....	Native.
.....	45	7½	66,663	18½	5	.....	Native.
.....	40	11½	107,180	14	.....	.....	Native.
.....	44	10	120,760	14	.....	.....	Native.
.....	37	21½	184,672	10½	.....	.....	Native.
.....	39	9	57,114	10	.....	.....	Native.
.....	44	8	.....	10½	.....	.....	Native.
.....	35	5½	38,071	15	4½	.....	Native.
.....	42	10½	66,883	12	5	.....	Native.
.....	40	9	67,760	11	6	.....	Native.
.....	50	8½	54,064	19	8½	.....	Native.
.....	36	20½	170,000	.....	.....	.....	Native.

Hyde Park	English full cream ...	20	20	72,000	9	.....	.....	Jerseys and Holstein.
Mason	Full cream	40	7	50,000	10	10	.....	Natives.
Holdredge	Rectan'lar full cream.	10	28	42,160	10	12½	.....	Natives, etc.
Millford	Full cream	50	6	4,000	10	8½	.....	Natives.
Sponenbergh, W. H.	Full cream	47	5	54,000	10½	8½	.....	Natives.
Gilbertsville	English full cream ...	20	28	84,000	10	.....	.....	Natives.
Dimmock Hollow	English full cream ...	19	28	76,000	10	.....	.....	Natives.
Highland Creamery	Skim	40	15	21,000	7	6	.....	Native and Holstein.
Maple Grove Creamery ..	Night skim	41	11	94,700	12	6	.....	Natives.
Hillington Creamery	Skim	40	7	50,000	14	4½	.....	Natives.
York & Brown	Night skim	50	20	20,000	12½	7	.....	Natives.
Shaw	Night skim	45	4	32,000	12½	5½	.....	Natives.
York & Brown	Night skim	50	9	90,000	12½	6½	.....	Native and Jerseys.
Edmeston, South	Skimmed	57	13½	158,107	12½	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ONEGO COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Brighton.....	Hay, grass and ground feed.	A few.	I think it requires more milk to make a pound of cheese, when used without grain or feed other than hay.	I have; cause, I think in my experience it has been mainly due to lack of cleanliness on the part of some of the patrons.
Schuyler's Lake.....	Grass, sowed corn and millet.	None.	.....	None.
.....	Grass.	None.	.....	.....
.....	Grass.	"	.....	I have; cause, from sour cans.
.....	Grass.	"	.....	I have; cause, by uncleanness.
.....	Grass.	"	.....	None.
.....	Grass.	"	.....	None.
.....	Grass.	"	.....	Yes; cause, by the patrons not taking sufficient care of the milk after it is put in the cans, and it is drawn to the factory only once a day.
C. C. Brockway, No. 1.....	Grass, sowed corn, wheat shorts and meal.	"	.....	Yes; cause, don't know.
Pay.....	Grass and sowed corn.	"	.....	I have.
Oakville.....	Grass and sowed corn.	"	.....	I have.
Kinney.....	Grass, sowed corn and wheat bran.	"	.....	None.
Hyder.....	Grass, sowed corn and wheat bran.	"	.....	Yes; cause, by the patrons not taking proper care of the milk during the hot weather.
Eggleston, O. E., No. 2.....	Wheat middlings, grass barley.	"	.....	I have; cause, neglect of taking care of it.
Hyder, No. 3.....	Grass.	"	.....	I have; cause, feeding whey and water and lack of care.
Eggleston, No. 3.....	Grass and wheat short.	Yes ..	It taints the milk.	Yes; cause, feeding whey and not taking proper care of cans.
Pleasant Valley.....	Grass, sowed corn, and wheat bran.	None.	.....	Yes; cause, by patrons not taking proper care of the milk after putting in the cans.

Eggleston & McLaughlin.....	Grass, sowed corn and wheat bran.	"	.....	I have; various causes.
East Springfield Creamery.....	Grass, sowed corn.	"	.....	Yes; cause, foul feed and overheating cans.
Cherry Valley.....	Grass, sowed corn.	"	.....	Cause, improper care of milk.
Springfield.....	Grass, sowed corn and grain.	"	.....	None.
Old Spring Creamery.....	corn	"	.....	None.
Eagle Creamery.....	corn	"	.....	Yes; cause, I don't know.
Eggleston, No. 4.....	corn. shorts and grits.	"	.....	Yes; cause, I believe the patrons that past- ure on the low lands, their grass not being as those on the uplands since the hot weather.
Eggleston, No. 5.....	Grass, sowed corn	"	.....	None.
German.....		"	.....	None.
Eagle Creamery, No. 2.....		"	.....	None.
Pittsfield Creamery.....	and grain.	"	.....	None.
Hawkins.....	Grass, sowed corn middlings and meal.	"	.....	None.
	Grass, sowed corn, shorts and corn meal.	"	.....	None.
Taylor Hill.....	Grass, sowed corn and grain.	"	.....	None.
Edmeston.....	Grass, sowed corn and wheat bran.	"	.....	None.
Hyde Park.....	Grass, sowed corn.	"	.....	Yes; cause, neglect and feed.
Mason.....	Grass, sowed corn.	"	.....	None.
Holdredge.....	Grass, sowed corn.	"	.....	None.
Millford.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Sponenbergh, W. H.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Gilbertsville.....	Grass, sowed corn.	"	.....	Yes; cause, I don't know.
Dimmock Hollow.....	Grass, sowed corn and wheat shorts.	"	.....	Yes; cause, not taking proper care of milk.
Highland Creamery.....	Grass, corn and wheat bran.	"	.....	None.
Maple Grove Creamery.....	Grass, sowed corn.	"	.....	None.
Hillington Creamery.....	corn.	"	.....	None.
York & Brown.....	corn.	"	.....	None.
Shaw.....	corn	"	.....	Yes; cause, don't know.
York & Brown.....	corn	"	.....	None.
Edmeston, South.....	corn, meal.	"	.....	None.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — OTSEGO COUNTY. — (Continued).

NAME OF FACTORY.	MISCELLANEOUS.			Remarks.
	Condition of factory.	Location and surroundings.	Drainage.	
Brighton	Good.....	Good.....	Fair.....	.....
Schuyler's lake.....	"	"	Good.....	.....
Otego .....	" .....	" .....	" .....	.....
Junction Creamery .....	" .....	" .....	" .....	.....
Well's Bridge.....	" .....	" .....	" .....	.....
Otadawa	Fair.....	.....	" .....	.....
Silver Spring Creamery.....	Good.....	Good.....	" .....	.....
Willow Valley.....	Poor.....	" .....	" .....	.....
Brockway, O. C., No. 1	Good.....	" .....	" .....	.....
Fay	Poor .....	" .....	" .....	.....
Oakville	Good.....	" .....	" .....	.....
.....	Bad .....	" .....	" .....	.....
.....	Good.....	" .....	" .....	.....
.....	"	"	"
.....	Fair.....	"	Open ditch	.....
.....	Good.....	"	Good.....	.....
.....	"
.....	Poor .....	" .....	" .....	.....
East Springfield Creamery .....	" .....	" .....	" .....	.....
Cherry Valley	Good.....	Poor .....	" .....	.....
Springfield.....	Good.....	Good.....	Good.....	.....

With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.

I think there is a great difference in the quality of milk of different herds; hope there may be some way to equalize it. There is a difference; but I do not know it could be equalized.

There is a difference; but I don't know how it

There is; ----- it could be adjusted.

There is; but don't know how it could be adjusted.

There is; make a butter test of each patron's milk and pay them according to the per cent of butter the milk yielded.

None.

There is; the only way I know of is some kind of an instrument to tell the difference as soon as it is placed in the milk.

There is; don't know how it can be equalized.

There is; don't know how it can be equalized.

There is none.

There is none.

None.

None.

None.

There is; but I don't know how to equalize it.

There is a difference; don't know how it could be equalized.

None.

None.

Location	Water	Soil	Vegetation	Climate	Notes
Cold Spring creamery	None.				
Eagle Creamery	None.				
Eagleton, No. 4	None.				
Eagleton, No. 5	None.				
German	None.				
Eagle Creamery, No. 2	None.				
Pittsfield Creamery	None.				
Hawkins	None.				
Taylor Hill	None.				
Edmeston	None.				
Hyde Park	None.				
Mason	None.				
Holdredge	None.				
Millford	None.				
Sponenburgh, W. H.	None.				
Gilbertsville	None.				
Dimmock Hollow	None.				
Shaw	None.				
York & Brown	None.				
Edmeston, South	None.				

* Into draughts and into whey-tube.

NOTE.—The inspector reports "that the c State brand when they are making full stock the same commission houses; and it has be factories using the State brand." He also s

cream cheese factories that do not use the
the year the skimmed cheeses are sent to
cream cheese, thus doing an injury to the
use the State brand.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ST. LAWRENCE COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	Butter.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
West Hermon.....	Hermon.....	June 20	Cheese	6	26	400	8,000	..	..	..	..
River Road	De Kalb	21	"	6	21	326	6,300	..	..	..	..
Somerville	Rossie	22	"	6	19	390	8,335	..	..	..	..
N. Y. S., No. 33	Gouverneur	23	"	6	16	500	10,264	..	..	..	..
Fowler.....	Fowler.....	26	"	6	27	460	8,468	..	..	..	..
Sylvia Lake.....	Fowler.....	27	"	6	14	260	5,000	..	..	..	..
Brazie Corners.....	Macomb.....	2	"	6	36	600	10,000	..	..	..	..
Richville.....	De Kalb	3	"	6	35	700	13,500	..	..	..	..
Cold Spring.....	Macomb	4	"	6	30	500	8,678	..	..	..	..
Hickory Lake.....	Macomb	6	"	6	11	250	4,500	..	..	..	..
Crystal Spring.....	Gouverneur	6	"	6	18	350	5,500	..	..	..	..
West Gouverneur.....	Gouverneur	7	"	6	19	375	6,700	..	..	..	..
Glit Edge	Russell	10	"	6	28	350	5,989	..	..	..	..
Clare.....	Clare.....	12	"	6	17	170	2,630	..	..	..	..
Elm Grove.....	Hermon.....	16	"	6	31	750	13,120	..	..	..	..
South Hermon	Hermon.....	17	"	6	23	650	10,300	..	..	..	..
East Gouverneur	Gouverneur	18	"	6	12	300	4,800	..	..	..	..
Halesboro.....	Fowler.....	19	"	6	20	430	6,200	..	..	..	..
Canton Village.....	Canton.....	20	"	6	50	900	16,000	..	..	..	..
Cream of the Valley	Gouverneur	23	"	6	25	750	11,000	..	..	..	..
Dickson.....	Antwerp	24	"	6	20	600	8,200	..	..	..	..
Steel's Corners	Rossie	25	"	6	30	600	9,200	..	..	..	..
Hodgkin	Rossie	26	"	6	18	450	9,000	..	..	..	..
East Antwerp.....	Antwerp.....	27	"	6	22	360	5,500	..	..	..	..
South Fowler	Fowler.....	28	"	6	8	200	4,400	..	..	..	..
Maple Grove.....	Pitcairn	30	"	6	30	300	4,300	..	..	..	..
Sprague, John E.	Gouverneur	2	"	6	30	525	7,500	..	..	..	..
DuPontville.....	Rossie	3	"	6	44	550	8,500	..	..	..	..
Oxbow	Antwerp.....	4	Colored cheese.	6	23	475	7,000	..	..	..	..
Gouverneur.....	Gouverneur	20	Cheese	6	23	640	7,500	..	..	..	..
Brandy Brook Creamery	Waddington	20	Butter	6	30	350	6,000	260	46,800	23	..

City	Commodity	Unit	Price	Quantity	Value
Gouverneur	Butter	lb	24	400	96,000
Madrid	"	lb	24	400	96,000
Norfolk	"	lb	24	400	96,000
Norfolk	"	lb	24	400	96,000
Waddington	"	lb	24	400	96,000
Oswegatchie	"	lb	24	400	96,000
Lisbon	"	lb	24	400	96,000
Oswegatchie	"	lb	24	400	96,000
Madrid	"	lb	24	400	96,000
Potadam	"	lb	24	400	96,000
Canton	"	lb	24	400	96,000
Fowler	"	lb	24	400	96,000
Lisbon	"	lb	24	400	96,000
Fowler	"	lb	24	400	96,000
Lisbon	"	lb	24	400	96,000
Masene	"	lb	24	400	96,000
Waddington	"	lb	24	400	96,000
Oswegatchie	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Madrid	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Hammond	"	lb	24	400	96,000
Lisbon	"	lb	24	400	96,000
Morristown	"	lb	24	400	96,000
Hammond	"	lb	24	400	96,000
Hammond	"	lb	24	400	96,000
Lawrence	"	lb	24	400	96,000
Macomb	"	lb	24	400	96,000
Lawrence	"	lb	24	400	96,000
Gouverneur	"	lb	24	400	96,000
Rosale	"	lb	24	400	96,000
Edwards	"	lb	24	400	96,000
Fine	"	lb	24	400	96,000
Oswegatchie	"	lb	24	400	96,000
Oswegatchie	"	lb	24	400	96,000
De Kalb	"	lb	24	400	96,000
De Kalb	"	lb	24	400	96,000
Heron	"	lb	24	400	96,000
Heron	"	lb	24	400	96,000
De Kalb	"	lb	24	400	96,000
Heron	"	lb	24	400	96,000
De Kalb	"	lb	24	400	96,000
Gouverneur	"	lb	24	400	96,000
Edwards	"	lb	24	400	96,000
Edwards	"	lb	24	400	96,000

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—St. LAWRENCE COUNTY—(Continued).

[illegible]

South Gouverneur	Full cream	65	10	118,320	10.70	.....	Yes...	Natives and grade.
Madrid Village .....	.....	.....	.....	.....	.....	.....	.....	.....
Village .....	.....	.....	.....	.....	.....	.....	.....	.....
Plum Brook .....	.....	.....	.....	.....	.....	.....	.....	.....
Top Notch Creamery .....	.....	.....	.....	.....	.....	.....	.....	.....
Fair View	Full cream	65	13	126,000	10.74	.....	Yes...	Grade, Ayrshire, Durham.
North Lisbon	Shipping	60	10	.....	10	9	No....	Mixed.
Heuvelton	Full cream; white	65	19	180,000	10.74	.....	Yes...	Native and grade Ayrshire.
Elliott Creamery .....	.....	.....	.....	.....	.....	.....	.....	Natives.
Maple Grove	Part hard, part soft .....	.....	.....	.....	.....	.....	.....	.....
Canton Village	Boston	65	20	.....	10.40	9	Yes...	Mixed.
Morley	Home trade	60	52	181,000	10	9½	No....	Natives and grades.
Island Branch	Full cream	58	12	165,000	10.84	.....	Yes...	Native, grades, Ayrshire, Jerseys.
Norway	Shipping	63	8	95,200	.....	9	.....	Mixed.
Sprague	Full cream	70	8	115,000	10.97	.....	.....	Native, grade, Ayrshire and Holstein.
Lisbon Centre	Shipping	62	15	.....	10	9	.....	Mixed.
Barnhardt's Island	Full cream	50	6	52,200	10	.....	.....	Native and grade.
Ogden Island .....	.....	.....	.....	.....	.....	.....	.....	Native, Ayrshire, Jerseys, Holstein.
Oswegatchie	Full cream	64	5	89,000	.....	.....	Yes...	Native, Ayrshire, Jerseys, Holstein.
Model	Full cream	64	7	90,000	11	.....	.....	Mixed.
Madrid Gilt Edge .....	.....	.....	.....	.....	.....	.....	.....	Native.
Centre	Full cream	58	9	98,000	10.50	.....	Yes...	Native.
I. & L.	Full cream	62	7	82,000	10.50	.....	No....	Native.
Morristown	White; full cream	50	5	50,000	10.50	.....	Yes...	Native.
St. Lawrence	White; full cream	60	5	5,500	10.60	.....	.....	Grade, Ayrshire, Jerseys, Holsteins.
North Hammond	White; full cream	55	7	76,000	10.50	.....	Yes...	Natives.
Centennial .....	.....	.....	.....	.....	.....	.....	.....	Natives.
Brier Hill	White; full cream	65	11	150,000	10.45	.....	Yes...	Natives and Holstein.
Marvin Hill	White; full cream	58	9	80,000	10.25	.....	.....	Mixed breeds.
Hammond Village	White; full cream	52	9	80,000	10.50	.....	.....	Natives.
Eagle Creamery .....	.....	.....	.....	.....	.....	.....	.....	Natives.
Griffith	White; full cream	64	16	190,000	10.50	.....	Yes...	Mixed breeds.
Deer River Creamery .....	.....	.....	.....	.....	.....	.....	.....	Natives.
Johnstown	White; full cream	54	8	81,000	.....	.....	Yes...	Native and grade Ayrshire.
Wegatchie	White; full cream	62	8	91,500	10½	.....	.....	Natives.
Edwards Village	White; full cream	62	16	186,000	10.25	.....	.....	Natives.
White Clover	White; full cream	62	7	30,000	10.50	.....	.....	Natives.
Frontier	White; full cream	56	9	96,780	10	.....	.....	Natives.
Simonds Creek	White; full cream	63	6	60,000	10.50	.....	.....	Natives.
Cow Path	White; full cream	64	8	82,000	10	.....	Yes...	Native and grade Holsteins.
Laloue	White; full cream	69	14	119,370	10	.....	No....	Native and grade Holsteins.
Hermon Village	White; full cream	70	6	152,000	10.25	.....	Yes...	Natives and grades.
Pierce	Full cream	60	4	64,020	10	.....	.....	Natives.
Richie	Full cream	57	6	89,034	10	.....	.....	Native and Jersey grades and Holsteins.
Porter Hill	White; full cream	62	5	65,210	10	.....	.....	Natives.
East DeKalb	Full cream	69	9	110,500	10	.....	No ...	Native, grades, Ayrshire and Holsteins.
Corbin	Full cream	60	9	40,100	10	.....	.....	Native and grade Ayrshire.
Belleville	White; full cream	60	8	162,500	10.25	.....	Yes...	Natives.
West Edwards	Full cream, Cheddar	58	8	52,000	10.25	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ST. LAWRENCE COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
West Hermon	June grass.	None.	Never had any experience.	Yes; cause, improper treatment of cows
River Road	Grass.	"	It has had effect.	Yes; cause, unclean cans; there are other causes. Yes; cause, improper treatment of the milk; and harsher, causes when exposed to what they are part of the treatment of milk and filthy cans.
Bomerville	Grass.	"	It has had effect if fed to excess.	
N. Y. B., No. 20	Grass.	"	If fed sweet and fresh no bad effect, if sour and rancid makes bad flavored.	
Fowler	Grass and wheat bran.	"	Has had effect.	
Sylvia Lake	Grass and hay.	"	Makes a sour mushy cheese with bad flavor.	Yes; cause, improper care of cans and evening's milk; farmers fully responsible for tainted milk. Yes; various causes, principal, improper treatment of milk.
Brasie Corners	Grass.	"	Has had effect and produces a poor cheese unless fed sweet from the vat.	
Richville	Grass.	"	Bad flavor.	
Cold Spring	Grass.	"	Bad flavor with tendency to produce sour, mushy cheese.	
Hickory Lake	Grass.	"	Bad flavor.	Yes; cause, improper care of cans and evening's milk; farmers fully responsible for tainted milk. Yes; various causes, principal, improper treatment of milk.
Crystal Spring	Grass.	"	Have had no experience.	
West Gouverneur	Grass and grain.	"	Produces bad-flavored cheese.	
Glit Edge	Grass.	"	Makes bad flavor in cheese.	

Clare	Grass.	"	Gives bad flavor.	Yes; ere that; Yes; No; c Yes; am; No; c	art of farm- this factory i improper lk. ilk, and no o any good. cans.
Elm Grove.....	Grass.	"	Never allow it and can not tell.	Yes; cause, unclean cans and improper care of milk.	
South Hermon	Grass.	"	Has bad effect unless fed sweet.	Yes; cause, negligence on the part of the patron.	
East Gouverneur	Grass.	"	Bad effect.	Yes; cause, dead stagnant water which is drunk by our cows.	
Hallaboro	Grass, wheat and bran.	"	Gives bad flavor.	Yes; cause, the cans have not been properly cared for.	
Canton Village	Grass.	"		Yes; cause, bad water, not sufficient airing of milk and unclean cans.	
Cream of the Valley	Grass, sowed corn.	"		Yes; cause, bad water.	
Dickson.....	Grass and grain.	Yes ..		No; cause, impure water.	that it comes and a time spent in and cooled too drawn from the
Steel's Corners.....	Grass and grain.	"		Yes; cause, evening's manure is generally Yes; cause and cans.	I have; cause, poor, rusty and unclean cans; principal cause in the factory. None. Yes; cause, poor care of milk and cans.
Hodgkin	Grass and grain.	None.	clean. Bad effect.		
East Antwerp	Grass and mid-	"	Do not know.		
South Fowler.....	dlinga. Grass.	Yes ..	Can detect it in the milk and it makes bad-flavored cheese.		
Maple Grove	Grass.	None.	Do not know.		
Sprague, John E.....	Grass.	"	Have had no experience.		
DuPontville	Grass.	"	Causes poor flavor and a soft, musby curd.		
Oxbow	Grass.	None.	Unfavorably.		
Gouverneur	Corn and shorts.....	"	Makes bad flavor.		
Brandy Brook Creamery	Fodder corn.....	None.	Has tendency to make cheese whey on the shelves and give them bad flavor.		
South Gouverneur.....					
Madrid Village.....					
Village.....					
Plum Brook					
Top Notch Creamery.....					

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—ST. LAWRENCE COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey on milk.	With regard to tainted milk and the causes of the same.
Fair View	Grass.	None.	.....	Yes; cause, as a rule, not airing at the or the milk after being of properly
North Lisbon	Pasture.	"	.....	at proper form over
Heuvelton	Fodder, corn and oats.	"	Taints the milk and produces porous curd.	None.
Elliott Creamery	Pasture.	.....	.....	Yes; cause, dirty dishes and not cooling the milk.
Maple Grove	Bran.	None.	.....	poor care, drink poor
Canton Village .....	.....	.....	.....	ken of the
Morley	Grass.	None.	.....	tawn.
Island Branch	Grass.	.....	Cause, it has bad flavor.	cans; not
Norway	Pasture.	"	.....	ie milk and of the cows.
Sprague	Grass and shorts.	"	Produces poor flavor.	None taken in.
Lisbon Centre	Pasture.	"	.....	No; cause, can not tell; we do not have any.
Barnhardt's Island	Fodder corn.	"	Ripens it too soon and causes sour, mushy curds and bad flavor.	None.
Ogden Island	Grass, hay and wheat bran.	"	.....	Yes; cause, bad water and leaving milk, where it comes in contact with imp're air.
Oswegatchie	Grass and fodder corn.	"	Produces bad-flavored cheese; no good in any form unless fed sweet or nearly so. Have had no experience.	Yes; cause is improper treatment of milk immediately after being drawn from the cows.
Model	Fodder corn.	"	.....	Yes; cause, dirty cans; not properly cooled.
Madrid Gilt Edge	Fodder corn and shorts.	"	Unfavorably.	Yes; cause, can not tell, unless it is caused by wild weeds.

I. & L.	Grass.	"	Sour, bad flavor unless fed sweet.	Yes; cause, bad water.
Morristown	Grass.	"	Have had no experience.	Yes; cause, farmers do not take care of their cans and do not stir their milk enough.
St. Lawrence	Grass.	"	Have had no experience, but am opposed to it.	Yes; cause, animal heat not allowed to pass off.
North Hammond	Grass and fodder corn.	"	Produces bad flavor unless feed is sweet.	Yes; cause, stagnant water.
Centennial	Pasture.	"	Has bad effect.	None.
Brier Hill	Grass.	"	Produces gassy milk and bad flavor.	No; cause, not properly caring for cans and milk.
Marvin Hill	Grass and fodder corn.	"	Have had no experience.	Yes; have had the worst; cause, marshy grounds and stagnant river water.
Hammond Village	Grass and sweet corn.	"	Have had no experience.	Yes; cause, bad water.
Eagle Creamery	Grass and sweet corn.	"	Unfavorably.	None.
Griffith	Grass.	"	Have not had any experience.	Yes; cause, animal heat.
Deer River Creamery	Pasture and green corn.	"	Causes, an open, porous, soft mushy curd, with bad flavor unless fed sweet.	None.
Johnstown	Grass.	"	Have had no experience.	I have; cause, hot weather together with poor water, poor feed and bad treatment.
Wegatchie	Grass.	"	Do not know, never had any experience.	
Edwards Village	Grass.	"	It produces gassy, bad flavored curds unless fed sweet.	
White Clover	Grass.	"	Effects it unfavorably, gives cheese bad flavor.	
Frontier	Grass.	"	Have had no experience.	bad air all night.
Simonds Creek	Grass and fodder corn.	"	It produces mushy, sour, bad-flavored curds if fed when sour.	Yes; cause, not properly caring for milk and cans being left in foul air during the night.
Cow Path	Grass and fodder corn.	"	Have had no experience.	
Laloue	Grass, fodder corn and shorts.	"	Have had no experience.	
Hermon Village	Grass.	"	Bad flavor the result.	I have; cause, can not tell the exact cause; lack of attention after being milked principally cause, I believe.
Pierce	Grass and shorts.	"		Yes; cause, farmers wholly responsible.
Riehle		"		

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- St. LAWRENCE COUNTY -- (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Porter Hill.....	Grass and fodder corn.	None.	No experience.	Yes; farmers think makers can make good cheese out of anything and do not take care of their milk.
East De Kalb.....	Grass and fodder corn.	"	No bad effect if fed well.	I have; cause, not proper care and allowing foul air to come in contact with the milk.
Corbin.....	Grass, fodder, corn and pumpkins	"	Unfavorably.	Yes; cause, poor water.] to remain near improper care; come in contact after being drawn from cow.
West Edwards.....	.....	"	.....	Yes; cause, poor water and improper care.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — ST. LAWRENCE COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
West Hermon co River Road..... 22 Somerville..... N. Y. S., No. 28.....	..... ..... At this season of the year (June) very little. If any, difference in quality: early in spring there is some difference.	Fairly good Poor..... Fair..... Very good.	Good..... "..... "..... ".....	Very poor..... Good..... ..... .....	..... ..... ..... .....
Fowler .....	.....	Fair	"	Excellent.	.....
Sylvia Lake.....	.....	Below the average.	"	Fair .....	.....
Brasle Corners .....	.....	Poor	Fair	Good.....	.....
Richville	In this factory the milk tests very evenly. there being very little difference in quality at this time of the year. Quality very uniform in this factory.	Fair	Good.....	"	brittle ones. See note headed Richville factory.
Cold Spring.....	.....	Not good....	Fair	"	See note headed Cold Spring factory.
Hickory Lake .....	.....	Very good.	Good.....	" .....	.....
Crystal Spring.....	.....	Good.....	" .....	.....	.....
West Gouverneur .....	.....	Fair .....	.....	Excellent..	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- ST. LAWRENCE COUNTY -- (Continued).

Locality	Price	Quality	Quantity	Remarks
South Hermon.....	from 2 to 4 per cent.	Good.....	Low.....	Poor.....
East Gouverneur.....	high and 20 per cent low.	".....	Good.....	Good.....
Halesboro.....	even.	".....	".....	".....
Canton Village.....	37 cent.	Fair.....	".....	Fair.....
Cream of the Valley.....	37 cent to 34 per cent.	Miserable.....	Fair.....	Poor.....
Dickson.....				
Steel's Corners.....	The milk tells very even.	Good.....	Good.....	Good.....
Hodgkin.....	Have not tested.	Splendid.....	".....	".....
East Axtwerp.....	Tests, 36 per cent; runs very even.	Ordinary.....	".....	Fair.....
South Fowler.....	Have not tested.	Good.....	".....	Good.....
Maple Grove.....	Varies 5 per cent from 30 per cent to 35 per cent.	Open, cold.....	".....	

Sprague, John E.	It does, and always has run very even and of good quality.	Good.....	"	"	No mill used here: the maker has had some trouble with poor flavor in cheese, but the cheese
Dapontville	Runs very even at this time of the year.	Fair.....	"	Fair.....	
Oxbow	Runs even.	Good.....	Good.....	Into river..	.....
Gouverneur.....	Very little difference in quality at this factory.	"	"	Good.....	.....
Brandy Brook Creamery...	Very little difference, since we have a dairy commissioner to look after the interests of honest dairymen.	"	On Brandy Brook	" .....	.....
South Gouverneur	Runs even, but poor, and has all summer; have used more milk this season than ever before.	"	Good.....	Fair.....	Requires more milk in this county this season than in many years, on account of a very dry season from last spring up to August fifteenth.
Madrid Village .....	.....	.....	.....	.....	.....
Village .....	.....	.....	.....	.....	.....
Phum Brook .....	.....	.....	.....	.....	.....
Top Notch Creamery	Varies about 8 per cent; can not say how it can be adjusted, but that would create disturbance among patrons.	Good.....	Good.....	Fair.....	If the maker undertakes to pay
Fair View					
					pure milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—St. LAWRENCE COUNTY—(Continued).

NAME OF FACTORY					a.	Remarks.
					Drainage.	
North Lisbon.....	.....	.....	Good.....	High gro'd.	Good.....	.....
Hemvelton .....	.....	.....	" .....	Good.....	Perfect .....	.....
Elliott Creamery .....	.....	.....	" .....	.....	Good.....	.....
Maple Grove.....	.....	.....	Good.....	Good.....	Good.....	.....
Canton Village .....	.....	.....	" .....	Morley vil-	.....	.....
Morley .....	.....	.....	.....	lage.	.....	.....
.....						
Island Branch.....	.....	.....	" .....	Good.....	Into river..	.....
Norway .....	.....	.....	" .....	High gr'nd	Good.....	.....
Sprague.....	.....	.....	" .....	Good.....	Ordinary ..	.....
.....						
Tests very even.						
Varies from two to five per cent by lacto-						
meter; can not say how the difference can						
be equalized.						
Varies; do not vary much, but milk varies						
at different seasons of the year; can not						
suggest any way by which the difference						
can be equalized.						

London Centre	By manufacturing each patron's milk separately.	"	Low land..	Good.....	The maker was well pleased with the way of handling the curd up to the time of packing; could not pack as they had no mill.
Barnhardt's Island	Very little difference in our quality.	Very poor..	Good.....	Perfect ....	.....
Garden Island	Runs very even; do not know of any way to adjust the difference except to reject all milk which does not test as good as the best, and you know that would never do.	Good.....	"	Good.....	.....
Oswegatchie	Runs very even.	Fair.....	"	Miserable..	.....
Model	Runs very even.	Fine.....	"	Perfect ....	.....
Madrid Gilt Edge	Runs even; ninety-eight per cent.	Good.....	On Grass river.	Good.....	.....
Centre	Runs very even; can not tell how to adjust such difference.	"	Good.....	" .....	.....
I. & L.	Runs even.	"	"	Perfect ....	.....
Morristown	Quality very even; can not suggest any plan.	Bad condition.	Poor	Miserable ..	See report.
St. Lawrence	Runs very even.	Good.....	Clean and neatly.	Good.....	.....
North Hammond	Varies but little.	Fair.....	Good.....	Fair.....	.....
Centennial	Have not been tested lately; ran even when last tested.	Good.....	On St. Lawrence river.	Good.....	.....
Brier Hill	Runs even as to quality of cream.	Fair.....	Good.....	Excellent..	.....
Marvin Hill	Varies five per cent; can not tell how to equalize same.	"	"	Good .....	.....
Hammond Village .....	.....	Very bad..	Poor.....	None.....	.....
Eagle Creamery .....	.....	Good.....	On St. Regis river.	Good.....	.....
Griffith .....	.....	Fair.....	Good.....	Poor.....	.....
Deer River Creamery .....	.....	Good.....	On Deer river.	Good.....	.....
Johnstown .....	.....	New and good.	High dry grounds.	" .....	.....
Wegatchie .....	.....	Good.....	On high grounds.	"	See report.
Edwards Village .....	.....	" .....	Good.....	" .....	.....
White Clover	show.	" .....	" .....	" .....	.....
Frontier	Runs even; all poor.	"	"	"	See note, Frontier factory.
Edmonds Creek	Runs even.	" .....	" .....	" .....	.....
	Not much difference in the value of milk.	Fair.....	" .....	" .....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—St. LAWRENCE COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Cow Path.....	Varies two per cent.	Good.....	High & dry	Good.....	.....
Lalona.....	No difference.	Fair.....	Dry & clean	".....	.....
Hermion Village.....	It has not been tested this season.	Poor.....	Fair.....	".....	.....
Pierce.....	Tests very even from 100 to 102 per cent.	Good.....	Good.....	".....	.....
Richie.....	Runs even and quality good.	".....	High & dry	".....	.....
Porter Hill.....	Not very much difference.	".....	Good.....	".....	.....
East De Kalb.....	No material difference.	".....	".....	".....	.....
Corbin.....	.....	".....	".....	".....	.....
Belleville.....	.....	Fair.....	Clean & dry	".....	.....
West Edwards.....	.....	.....	.....	".....	.....

RICHVILLE FACTORY. DeKalb St. Lawrence county.—A McPherson curd mill used here: the instructor worked the milk into twenty-two

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHENECTADY COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average price received for butter.
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	.....	.....
Princetown Dairy Association	Princetown.....	Sept. 27	Cheese.....	6	11	90	1,500	....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHOENECTADY COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Princeton Dairy Association	Full cream.....	55	8	10½	8½	.....	Yes...	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHOENROTADY COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Princeton Dairy Assoc'n.	Hay, grass and corn fodder.	None.	Yes; some during the hot weather in July.	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHOENECTADY COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Princetown Dairy Assoc'n.	There is, but do not know how to equalize it.	Good.....	Good.....	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—SCHUYLER COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average price received for butter.
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.		
Moreland Creamery..	Dix	Aug. 13	Butter and cheese.....	6	24	125	2,000	75	15,000	27	22	
Putnam Creamery	Orange	14	Cheese.....	6	13	100	1,300	...	.....	...	...
Monterey	Orange	15	"	5½	17	100	1,200	...	.....	.....	...
Cook's Creamery	Havana	16	Retails milk in Havana ..	....	1	20	320	...	.....	.....	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHUYLER COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Moreland Creamery	Grass.	None.	.....	Yes; cause, unable to ascertain.
Putnam Creamery	Pasture.	"	.....	None.
Monterey	Grass.	"	.....	None.
Oook's Creamery .....	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SCHUYLER COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Moreland Creamery.....	.....	Good.....	.....	Good.....	.....
Putnam Creamery	There is; do not know how it could be equalized.	"	Good.....	Poor .....	.....
Monterey .....	.....	" .....	" .....	.....	.....
Gook's Creamery.....	.....	" .....	" .....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SENECA COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Seneca Farm Creamery.....	Seneca Falls .....	.....	Butter and cheese.....	12	7	100	2,000	30	3,390	25	25

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SENECA COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Seneca Farm Creamery..	Half skim	40	1	7,800	10	12	Native, Jersey, Holstein.
						Do you favor State brand?	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — SENECA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Seneca Farm Creamery	Grass and grain....	None.	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888--SENECA COUNTY--(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Seneca Farm Creamery.....	Good.....	Good.....	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — STEUBEN COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Spaulding, H	Howard	Oct. 19	Cheese	6	16	225	2,203 .....	...	...	...	...
Powd	Howard	19	"	6	29	500	7,000 * .....	...	...	...	...
Cohocton Valley	Avoca	20	"	6	18	200 .....	...	75	16,000 .....	...	20
Howard	Howard	20	Butter and cheese	7	12	130	1,070	9	3,800 .....	...	32
Kanona	Avoca	20	Cheese	6	12	115	1,500 .....	...	...	...	...
Bennett Creek	Canisteo	20	"	6	20	280	2,500 .....	...	...	...	...
Faulkners & Willett's Creamery ..	Hornellsville	22	Butter	8	40	500	1,600	300	140,000 .....	...	25
Cold Spring	Hartsville	22	Cheese	6	20	175	2,300 .....	...	...	...	...
Murry's Hill	Greenwood	23	"	6	29	195	2,500 .....	...	...	...	...
Dryden Hill	Greenwood	23	"	6	26	254	2,400 .....	...	...	...	...
Greenwood, No. 1	Greenwood	23	"	6	40	350	984 .....	...	...	...	...
Greenwood	Greenwood	23	"	6	14	90	1,400 .....	...	...	...	...
Purdy Creek	Hartsville	23	"	6	17	135	3,200 .....	...	...	...	...
Rexville	West Union	24	"	6 1/2	67	670	4,600 .....	...	...	...	...
Updike & Co	West Union	24	"	6	22	300	1,700 .....	...	...	...	...
Troupsburgh	Troupsburgh	24	"	6	36	350	1,500 .....	...	...	...	...
Woodhull	Woodhull	25	"	6	19	150 .....	...	...	...	...	...
Corning Creamery	Corning	26	Butter	6	16 .....	...	...	121	83,750 .....	...	25
Howlett Creamery	Cameron	28	"	6	17	130 .....	...	50	10,000 .....	...	25

* Cream; Fairland system.

† Fairland system.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—STURGEON COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Spanning, H.	Full cream	56	2	60,000	10	9½	Yes...
Powd	Full cream	60	6	126,000	10	9½	Yes...
Cohocton Valley	Whiteskin	58	2	57,000	11	8½	Yes...
Howard	Full cream	62	2	41,000	10	9½	No...
Kanona	Full cream	60	4	76,000	10	9	Yes...
Bennett Creek	Full cream	58	2	26,000	10½	9	Yes...
Faulkners & Willett's Creamery	Full cream	56	2	80,000	10	9½	Yes...
Cold Spring	Full cream	57	2	68,000	10	9½	Yes...
Murry's Hill	Full cream	56	2	36,000	9½	9	Yes...
Dryden Hill	Full cream	56	2	38,000	9	9	No...
Greenwood, No. 1	Colored; full cream.	56	2	216,000	9.40	10	Yes...
Greenwood	Full cream	56	2	70,000	9½	9½	Yes...
Purdy Creek	Full cream	56	2	40,000	9½	9½	Yes...
Bexville	Full cream	56	2	40,000	9½	9½	Yes...
Updike & Co	Full cream	56	2	40,000	9½	9½	Yes...
Troupsbrough	Full cream	56	2	40,000	9½	9½	Yes...
Woodhull	Full cream	56	2	40,000	9½	9½	Yes...
Corning Creamery	Full cream	56	2	40,000	9½	9½	Yes...
Howlett Creamery	Full cream	56	2	40,000	9½	9½	Yes...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- STEUBEN COUNTY -- (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Spaulding, H.....	Grass and corn fodder.	None.	Makes a tainted milk; a poor cheese.	Yes; cause, warm weather, negligence in cleaning cans and improper treatment of cows.
Powd.....	Grass, corn fodder and grain.	"	It makes the milk taint sooner, and the cheese made therefrom would be heavy, porous and puffy.	None.
Ochooston Valley	Grass and corn fodder.	"	Do not know.	None.
Howard	Grass and corn fodder.	"	It would make cheese of an inferior quality; it would be puffy and heavy and would not keep long.	Have had; cause, warm weather and negligence of the patrons in not dipping and aerating the milk.
Kanons	Grass, corn fodder and grain.	"	Taints the milk.	None.
Beckett Creek.....	Grass, corn fodder and grain.	"	If my patrons fed whey it would cause a taint in the milk.	Cause, neglect to dip to allow the animal heat to escape, and not cleansing cans thoroughly.
Faulkners & Willett's Ore'y	Grass, corn fodder and grain.	"	Do not know.	.....
Cold Spring.....	Grass and corn fodder.	"	Does not know; has never had any experience.	..... on the
Merry's Hill	Grass, corn fodder and grain.	"	The cheese have poor and would	pe-
Dryden Hill.....	Grass, corn fodder and grain.	"	Do not know.	.....
Greenwood, No. 1.....	Grass and corn fodder.	"	Do not know; never had any experience.	Yes; cause, hot weather, improper care of cans and milk.
Greenwood.....	Grass and corn fodder.	"	Cause an offensive smell to arise when the milk is heated.	Yes; cause, hot weather, improper care.
Purdy Creek.....	Grass and corn fodder.	"	If the vats were kept clean it would not materially effect the milk, however, they are not generally, and it will cause tainted milk.	generally, some weather, seed cows, decom- sture where cows graze.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — STEUBEN COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Bexville.....	Grass, corn fodder and grain.	None.	Makes a thin, poor quality of milk.	Yes; cause, hot weather, improper care, driving cows too fast.
Updike & Co.....	Grass, corn fodder and grain.	"	Causes a tainted milk.	Yes; cause, negligence in attending to milk and also cans.
Troupsburgh.....	Grass and corn fodder.	"	Makes a thin and poor quality.	Yes; cause, hot weather, improper care of milk cans.
Woodhull.....	Grass and corn fodder.	"	It would cause the cheese made therefrom to be puffy, porous and heavy, and it would not have good flavor, and would not keep well.	Some; cause, negligence in giving it proper attention by patrons, generally not dipping enough to allow the animal heat to escape.
Corning Creamery.....	Grass and corn fodder.	"	Makes a thin, poor quality.	.....
Howlett Creamery....	Grass and corn fodder.	"	.....	.....

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 — STEUBEN COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Spaulding, H.....	That it is justified.	Good.....	Good.....	Good.....	.....
Powd.....	That it is justified to my patrons.	".....	Favorable..	".....	.....
Cohocton Valley.....	".....	Good.....	".....	.....
Howard.....	Fair.....	".....	Excellent..	.....
Kanona.....	Good.....	".....	Fair.....	.....
Bennett Creek.....	".....	".....	".....
Faulkners & Willett's Creamery.....	".....	".....	Good.....	.....
Gold Spring.....	Fair.....	".....	".....	.....
Murry's Hill.....	".....	".....	".....
Dryden Hill.....	Good.....	".....	Fair.....	.....
Greenwood, No. 1.....	".....	".....	Good.....	.....
Greenwood.....	".....	".....	".....
Purdy Creek.....	".....	".....	".....
Beaville.....	".....	".....	First-class.	.....
Uplike & Co.....	Fair.....	".....	Poor.....	.....
Troupeburgh.....	".....	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — STEUBEN COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Woodhull	There is some difference, which we can't adjust, and think it best to leave in the present way.	Very good.	Good.....	Excellent..	.....
Corning Creamery	There is some difference; we use the Fair-land system, so we pay our patrons according to both quality and quantity.	Fair	"	Good.....	.....
Howlett Creamery		Good.....	" .....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—TIOGA COUNTY—(Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Smith & Wood Creamery	Owego	Aug. 1	Butter and cream	12	6	160	1,200	10	3,050	24	28
	Berkshire	1	Cheese	6	24	300	5,000	...	...	...	...
	Tioga	3	...	5½	25	250	3,000	...	...	...	...
	Spencer	4	Butter and cheese	6	23	300	4,000	600	80,000	24	19
	Nichols	7	Butter	7	20	400	3,000	135	29,500	25	21
	Barton	8	"	12	7	160	2,000	50	20,000	20	27½
	Barton	9	"	12	40	400	...	300	60,000	...	...
	Owego	10	"	12	2	140	2,800	...	...	...	...
	Owego	11	"	7	123	1,100	...	1,000	...	23	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TIOGA COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Cheese.					Breed of cows.
		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Smith & Wood Creamery.	Full cream	10	50,000	10	9	..	..
Speedville	Full cream	6	55,000	10	9 1/2	..	..
Smithboro	Skim	5	30,000	15	4	..	..
Seeley's Creamery	..	..	..	..	..	..	..
Nichols' Creamery	..	..	..	..	..	..	..
City Creamery	..	..	..	..	..	..	..
Cayuda Creamery	..	..	..	..	..	..	..
Owego Dairy	..	..	..	..	..	..	..
Standard Butter Comp'y.	..	..	..	..	..	..	..

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TIOGA COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Smith & Wood Creamery...	Bran and corn meal.	None.	.....	Yes; cause, can not tell.
Speedsville	None.	"	.....	None.
Smithboro	Cottonseed meal....	"	.....	Yes; cause, sour lowland grass.
Seeley's Creamery	Bran and corn meal.	"	Makes floating curds.	None.
Nichols' Creamery .....	.....	.....	.....	.....
City Creamery .....	.....	.....	.....	.....
Cayuda Creamery .....	.....	.....	.....	.....
Owego Creamery	Bran.	.....	.....	.....
Standard Butter Company..	.....	None.	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TIOGA COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Smith & Wood Creamery.....	Good.....	Good.....	.....	.....
Speedsville	"	On side hill .....	.....	.....
Smithboro	"	Good.....	Good.....	.....
Seeley's Creamery	Thinks this may be ascertained by testing the milk.	"	High gr'd.....	Sewer to river.	.....
Nichols' Creamery	"	Good.....	River .....	.....
Clity Creamery	"	Dry land ground.....	.....	.....
Cayuda Creamery	"	Good.....	.....	.....
Owego Dairy	"
Standard Butter Company.	"

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TOMPKINS COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average price received for butter.
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.		
McLean Creamery	Groton.....	July 24	Butter and skim cheese..	6	26	300	6,000	230	42,000	24	26	
Lafayette	Groton.....	26	Cheese.....	6	43	500	10,000	...	...	...	...
Freeville	Dryden	26	"	6	10	125	2,500	...	...	...	...
Caroline.....	Caroline	30	"	6	33	300	5,000	...	...	...	...
Lafayette	Groton.....	Sept. 19	"	6	45	500	10,000	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TOMPKINS COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.						Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
McLean Creamery	Skim.....	50	7	12,600	13	5	No ...	All kinds.
Lafayette	Full cream	58	17	150,000	10	9	Yes ..	All kinds.
Freeville	Full cream	50	5	306,000	10	9½	" ..	All kinds.
Caroline.....	Full cream	50	11	900,000	9.7	8½	" ..	All kinds.
Lafayette	Full cream	55	19	125,000	10	.....	" ..	Native.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TOMPKINS COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey. on milk.	With regard to tainted milk and the causes of the same.
McLean Creamery.....	Bran and meal.	None.	Makes sour cheese and very poor quality milk.	No; cause, cans not taken care of.
Lafayette .....	.....	"	.....	None.
Freeville .....	.....	"	.....	None.
Caroline	Bran and corn meal.	"	.....	Yes, very little cause; don't know.
Lafayette	Grass .....	"	.....	Yes; cause, poor water.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — TOMPKINS COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
McLean Creamery.....	Can not answer the question.	Good.....	Good.....	Good.....	.....
Lafayette	Don't know.	" .....	" .....	" .....	.....
Treenville	Do not know.	" .....	" .....	" .....	.....
Caroline.....	.....	" .....	" .....	" .....	.....
Lafayette.....	Not much difference.	Fair.....	"	To creek ..	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WAYNE COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Sodus Creamery.....	Sodus.....	Oct. 24	Butter.....	12	107	500	.....	176	50,000	.....	21
Montanas.....	Butler.....	24	Cheese.....	5½	22	125	1,400	.....	.....	.....	.....
Lincoln.....	Walworth.....	24	".....	5	50	300	2,500	.....	.....	.....	.....
Macedon.....	Macedon.....	24	".....	5	32	160	1,500	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WAYNE COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	CHEESE.					Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	
Sodus Creamery.....	.....	.....	.....	.....	.....	.....	Jerseys, Holstein and Durhams.
Montanus.....	Full cream	60	2	30,000	10	10	Common and grade.
Lincoln	Full cream	45	5	31,000	10½	11	Common, native and Jerseys.
Macedon	Full cream	60	3	20,000	9½	10	Native and Durhams.

ABSTRACT OF FACTORY IMPROVEMENTS FOR 1888 — WAYNE COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Sodus Creamery	Sowed corn, bran meal and middlings.	None.	Do not know how it would affect the milk; think it would give a poor flavor.	None.
Montanas	Sowed corn and bran.	"	Does not know what effect it would have on milk.	Does not know.
Lincoln	Grass, bran and sowed corn.	"	Whey quickens milk, heavy, and makes it and	Does not know.
Macedon	Grass.	"	It	Does not know.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—WAYNE COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	MISCELLANEOUS.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Sodus Creamery.....	There is by us better pay as to quality by ment.	Good.....	Dry gr'und	Good.....	.....
Montanas	There is ity of any question among our patrons.	"	Dry gr'und	" .....	.....
Lincoln.....	There is some difference in the quality and but alize d. I qual-	"	Good.....	" .....	.....
Macedon		First-class.			.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Castle.....	Castle.....	July 18	Cheese.....	6	43	300	6,500	.....	.....	.....	.....
Griffith Corners	Pike	18	"	7	16	200	3,800	.....	.....	.....	.....
Empire.....	Pike	18	"	7	22	200	3,500	.....	.....	.....	.....
Silver Lake	Perry	19	"	6	31	200	3,000	.....	.....	.....	.....
Oatka	Gainsville	19	"	6	24	200	4,000	.....	.....	.....	.....
Gainsville.....	Gainsville	19	"	7	56	600	10,000	.....	.....	.....	.....
Silver Springs	Gainsville	19	"	6	37	250	4,500	.....	.....	.....	.....
Bliss Station.....	Eagle	20	"	9	26	200	4,000	.....	.....	.....	.....
Centennial.....	Pike	20	"	6	31	350	6,000	.....	.....	.....	.....
Campbell Hill	Pike	20	"	6	17	225	5,000	.....	.....	.....	.....
Excelsior.....	Eagle	20	"	6	8	130	2,500	.....	.....	.....	.....
East Koy	Pike	20	"	6	16	225	4,000	.....	.....	.....	.....
Pike Station	Gainsville	20	"	6	22	200	3,700	.....	.....	.....	.....
Eagle.....	Eagle	21	"	6	23	300	4,300	.....	.....	.....	.....
South Eagle.....	Centerville	21	"	6	20	250	3,500	.....	.....	.....	.....
Cadwell's Corners	Eagle	21	"	6	30	250	5,000	.....	.....	.....	.....
Star, No. 1.....	Wetherfield	21	"	6	42	500	8,000	.....	.....	.....	.....
Wing Street.....	Eagle	21	"	6	20	225	3,000	.....	.....	.....	.....
Johnsonburgh, No. 2	Java	25	"	6	39	400	6,879	.....	.....	.....	.....
Wetherfield Springs	Wetherfield	25	"	6	26	300	5,500	.....	.....	.....	.....
Hermitage	Wetherfield	26	"	7	25	600	11,000	.....	.....	.....	.....
Arcade Centre, No. 8.....	Arcade.....	26	"	7	21	600	9,800	.....	.....	.....	.....
J. B. Lewis, No. 7.....	Arcade.....	26	"	6	36	400	8,000	.....	.....	.....	.....
Star, No. 2.....	Java	26	"	6	26	225	3,550	.....	.....	.....	.....
Java Centre, No. 9.....	Java	26	"	6	41	350	6,700	.....	.....	.....	.....
Cloverfield, No. 12	Java	26	"	7	50	600	10,800	.....	.....	.....	.....
Punkshire, No. 10	Arcade.....	26	"	6	29	275	4,974	.....	.....	.....	.....
Johnsonburgh, No. 12.....	Arcade.....	26	"	6	19	150	2,500	.....	.....	.....	.....
Johnsonburgh, No. 11.....	Java	26	"	6	34	400	6,800	.....	.....	.....	.....
Java Lake.....	Java	26	"	6	42	450	8,400	.....	.....	.....	.....
County Line, No. 11.....	Arcade.....	27	"	6	22	250	4,000	.....	.....	.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Arcade	Arcade	July 27	Cheese	7	39	525	10,000	...	...	...	...
Dale	Middlebury	Aug. 4	"	6	21	250	4,200	...	...	...	...
Town Line	Middlebury	4	"	6	14	150	2,500	...	...	...	...
Orangeville, No. 7	Orangeville	8	"	7	10	80	1,640	...	...	...	...
Greene, C. A.	Orangeville	8	"	6	42	400	5,800	...	...	...	...
Flat's Branch, No. 8	Orangeville	8	"	6	27	300	5,200	...	...	...	...
Boales	Orangeville	8	"	6	13	175	2,008	...	...	...	...
Excelsior, No. 6	Athens	8	"	6	44	400	6,636	...	...	...	...
Johnsonburgh, No. 3	Sheldon	8	"	6	17	250	3,892	...	...	...	...
Attica	Attica	8	"	6	35	300	4,800	...	...	...	...
Johnsonburg, No. 5	Bennington	8	"	6	18	175	2,795	...	...	...	...
East Bennington	Bennington	23	"	6	37	350	2,850	...	...	...	...
Rekstein	Bennington	24	"	6	9	130	1,487	7	800	212	12
Peny	Bennington	24	"	7	43	600	6,200	...	...	...	...
Strykersville	Sheldon	24	"	8	53	700	8,411	...	...	...	...
Sheldon	Sheldon	24	"	6	53	600	6,800	...	...	...	...
Cloverfield, No. 14	Sheldon	24	"	6	39	450	6,200	...	...	...	...
Tosier, No. 5	Sheldon	24	"	6	38	350	5,747	...	...	...	...
Clearfield, No. 14	Sheldon	24	"	6½	49	700	6,515	...	...	...	...
Johnsonburgh, No. 1	Orangeville	24	"	6	31	400	4,946	...	...	...	...
Star, No. 3	Orangeville	25	"	6	23	275	2,720	...	...	...	...
Sharp School-house	Warsaw	25	"	6	25	175	2,109	...	...	...	...
Cloverfield, No. 3	Bennington	26	"	6	52	600	5,600	...	...	...	...
Cloverfield, No. 17	Bennington	28	"	6½	88	450	6,860	...	...	...	...
Cloverfield, No. 24	Bennington	28	"	6	65	300	4,200	...	...	...	...
Park	Attica	20	"	5½	30	335	4,000	...	...	...	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Average weight of cheese.	Output.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Do you favor State brand?	
Castle.....	Full cream	56	11	125,000	10	9	Yes...	Holsteins and
Griffith Corners	Full cream	55	7	70,000	10	9	"	
Empire	Colored; full cream ..	60	6	70,000	15	9	"	
Silver Lake	Full cream	40	7	55,000	10.50	9	"	Holsteins and
Oatka	Colored; full cream ..	60	6	71,000	10.35	9	"	
Gainsville.....	Colored; full cream ..	60	15	190,000	10½	9	"	
Silver Springs	Full cream	55	8	86,000	10½	9	"	
Bliss Station	Full cream	60	7	80,000	10.15	9½	"	
Centennial	Full cream	60	10	100,000	10½	9	"	
Campbell Hill	Full cream	60	8	80,000	10½	9	"	
Excelsior	Full cream	55	4	36,000	10½	8½	"	
East Koy	Colored; full cream ..	60	7	70,000	10	9½	"	
Pike Station	Full cream	60	6	70,000	10.25	9	"	
Eagle	Full cream	60	7	75,000	10½	9	"	
South Eagle	Full cream	60	7	65,000	10½	9	"	
Cadwell's Corners	Full cream	62	8	80,000	10	9	"	Durhams and
Star, No. 1	Full cream	67	14	125,000	10.25	9	Yes...	
Wing Street	Full cream	60	5	55,000	10.25	9	"	
Johnsonburgh, No. 2 ..	Full cream	58	11	100,000	10½	9	"	d Durhams, d Durhams.
Wetherfield Springs.....	Full cream	55	10	150,000	10	9	"	
Hermitage	Full cream	61	17	175,000	10½	9	"	
Arcade Centre, No. 8 ..	Full cream	63	16	165,000	10½	9	"	ma.
J. B. Lewis, No. 7	Full cream	63	12	150,000	10½	9	Yes...	
Star, No. 2	Full cream	58	6	55,000	10	9	"	
Java Centre, No. 9	Full cream	60	10	110,000	10½	9	"	
Cloverfield, No. 19	Full cream	60	17	180,000	10.25	9	"	
Punkshire, No. 10	Full cream	60	8	85,000	10.25	8½	"	
Johnsonburgh, No. 12....	Full cream	60	4	50,000	10.25	8½	"	

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	Kind of cheese manufactured.	Cheese.					Do you favor State		Breed of cows.
		Average weight of cheese.	Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.	Yes.	No.	
Johnsborough, No. 11.	Full cream	60	10	30,000	10 1/4	8 1/2	Yes		Mostly natives.
Jave Lake	Full cream	61	13	150,000	10 1/4	9			and Durham.
County Line, No. 11	Full cream	62	6	70,000	10.25	9	Yes		
Arade	Full cream	63	15	20,000	10.25	9			
Dale	Full cream	57	7	67,000	10.25	8 1/2			
Town Line	Full cream	60	4	50,000	10.25	8 1/2			
Orangeville, No. 7	Full cream	60	2	40,000	10.3	8 1/2	Yes		and Durham.
Greene, C. A.	Full cream	58	10	90,000	10.15	8 1/2			
Platt's Branch, No. 8	Full cream	60	6	98,000	10 1/2	8 1/2			
Boales	Full cream	60	9	35,000	10.05	8 1/2	Yes		
Excelsior, No. 6	Full cream	60	11	120,000	10.3	8 1/2	No		
Johnsborough, No. 3.	Full cream	66	6	80,000	10 1/2	8 1/2			
Attica	Full cream	60	8	35,000	10 1/2	8 1/2			
Johnsborough, No. 5.	Full cream	60	4	40,000	10 1/2	8 1/2	No		
East Bennington	Full cream	60	5	80,000	10.3	9			Natives.
Rekstein	Full cream	58	2	24,000	12	12 1/2			Native and Jersey.
Peny	Swiss cheese	75	2	120,000	10 1/2	10 1/2			Jerseys and natives.
Stryker'sville	Full cream	60	10	120,000	10 1/2	8 1/2			Mixed Holsteins, Jerseys and natives.
Rhendon	Full cream	60	13	180,000	10 1/2	8 1/2			
Cloverfield, No. 14	Full cream	60	10	145,000	10 1/2	8 1/2	No		Durham.
Tozier, No. 5	Full cream	60	8	185,000	10 1/2	8 1/2			
Cloverfield, No. 14.	Full cream	60	9	111,000	10 1/2	8 1/2			
Cloverfield, No. 1.	Full cream	60	11	188,000	10.4	8 1/2			
Star, No. 8	Full cream	60	9	95,000	10 1/2	8 1/2	Yes		and natives.
Sharp School-house	Full cream	58	5	50,000	10.3	8 1/2	No		
Cloverfield, No. 8	Full cream	50	5	35,000	10	8 1/2			
Cloverfield, No. 17	Full cream	60	10	121,000	10 1/2	8 1/2			Natives.
Cloverfield, No. 17	Full cream	62	10	135,000	10.5	8 1/2			Natives.
Cloverfield, No. 24	Full cream	60	7	80,000	10.4	8 1/2			
Park	Pine apple	2 to 6	100	75,000	9.99				

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Castile	Grass, grain and bran.	None.	It might taint the milk.	
Griffith Corners	Grass.	"	Gives the milk a bad odor.	
Empire	Grass and grain.	"	It would affect the milk unfavorably and give the cheese a bad flavor.	
Silver Lake	Grass, bran, corn meal and corn fodder.	"	Injurious, and would reduce the strength of the milk.	
Oatka	Grass, bran, middlings, etc.	"	Injurious, and would give the cheese a bad odor.	
Gainsville	Grass, corn meal and middlings.	"	Gives it a bad odor.	
Silver Springs	Grass, corn meal and bran.	"	It would taint the milk and require more milk to make a pound of cheese.	
Bliss Station	Grass, corn, meal and bran.	"	Injurious, and would give the cheese a bad flavor.	
Centennial	Grass, corn and grain.	"	Injurious, and gives a bad odor to the cheese.	
Campbell Hill	Grass, middlings, grain.	"	Injurious, and would make the curd watery and give a bad odor to the cheese.	
Excelator	Grass, middlings and corn.	"	Can not get curd to cook, and does not show the coloring in the cheese.	
East Koy	Grass.	"	give a bad	ore milk to
Pike Station	Grass, corn, grain and middlings.	"		eam to the
Ragle	Grass, bran, corn, corn fodder and middlings.	"		e milk and d of cheese.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
South Eagle.....	Grass, bran and corn.	None.	It would affect it injuriously.	No; cause, not stirring the milk properly when put into the cans.
Caldwell's Corners.....	Grass, corn, corn fodder.	"	Injurious; and would make the curd watery and give a bad odor to the cheese.	Yes; cause, by not keeping the milk cans clean, or by not properly taking care of the cows.
Star, No. 1	Grass, bran, corn fodder and middlings.	"	It would taint the milk.	Cause, feeding the cows whey or neglecting to keep the milk cans clean.
Wing Street	Grass, corn meal and bran.	"	The milk would coagulate too quickly, and give a bad flavor to the cheese. It would taint the milk.	None; cause, stagnant water, or not stirring the milk after milking.
Johnsonburgh, No. 2.....	Grass.	"	Would taint it.	Had some; cause, one mess the milk cans too full.
Wetherfield Springs	Grass.	"	Injurious; and make the cheese poor, and give it a bad flavor.	No; in milking.
Hermitage	Grass, grain and corn.	"	Taint the milk; and makes a poor cheese. It would taint it.	None.
Arcade Centre, No. 3.....	Grass and grain.	"	It would taint it.	Yes; in milking.
Lewis, J. B., No. 7.	Grass and grain.	"	Gives it a bad effect.	Yes; in milking.
Star, No. 2.....	Grass.	"	Injurious; and think it would give the cheese a bad flavor.	Yes; in milking.
Java Centre, No. 9.....	Grass, grain, bran and middlings.	"	Would have a bad effect upon the milk.	None.
Cloverfield, No. 12.....	Grass, meal and bran.	"	It would weaken the milk.	Yes; cause, cows drinking from stagnant pools of water, or by not aerating or cooling the milk properly.
Punkshire, No. 10	Grass, meal and bran.	"	Think it would have a bad effect.	Have had; cause, very warm weather, and not scalding the cans.
Johnsonburgh, No. 13.....	Grass, corn meal and bran.	"		Yes; cause, by the cows eating weeds in dry weather, or by drinking stagnant water.
Johnsonburgh, No. 11.....	Grass, bran, corn and middlings.	"		

Java Lake	Grass, corn-meal, bran and corn fodder.	"	Have a bad effect upon the milk and you could smell it in the cheese.	Have had; cause, the cows might be sick, or by not taking proper care of the cans.
County Line, No. 11.	Grass.	"	It would taint the milk.	Quite considerable; cause, impure water, or by carrion allowed to remain in the pasture.
Arcade	Grass, meal and bran.	.....	Yes, it gives the milk a sickish, sweet smell; it would also take more milk to make a pound of cheese.	milk, or log stir
Dale	Grass and grain.	None.	It would taint it.	nk-
Town Line	Grass.	"	It would taint the milk.	low
Orangeville, No. 7.	Grass.	"	I think it would injure both the milk and the cheese made therefrom.	ly; rial
Greene, C. A.	Grass, bran and meal.	"	I think it would taint the milk during the warm season.	hus off. ma. eat
Flat's Branch, No. 8.	Grass and middl'g. Grass.	"	Makes a sour-tainted milk.	out.
Boales	Grass.	"	Causes a floating curd.	Yes; cause, improper care of cans and milk.
Excelsior, No. 6.	Grass, corn, fodder and grain.	"	Makes a thin, poor quality of milk.	Yes; cause, improper care of cans and milk.
Johnsonburgh, No. 3.	Grass, corn, fodder and grain.	"	Do not know; never had any experience.	Some; cause, not properly caring for the milk; should be dipped and allow animal heat to pass off.
Attica	Grass.	"	I think it would taint the milk.	None.
Johnsonburgh, No. 5.	Grass.	"	Do not know; never had any experience.	Yes; cause, improper care.
East Bennington	Grass and bran.	"	Would make sour milk and a wet cheese.	None.
Bekstein	Grass and corn fodder.	"	Think it would make a poor cheese.	Yes; cause, neglecting to stir and properly care for the milk.
Peny	Grass and corn fodder.	"	Think it would make a soft, slippery curd.	Yes; cause, sometimes from poor feed and more
Strykersville	Grass and corn.	"	our it; at least, it would	Yes; c
Sheldon	Grass and corn fodder.	"	id flavor in the milk and	ly taken care
Gloverfield, No. 14.	Grass, corn and bran.	"	id have a good effect.	of.
Tosler, No. 8.	Grass, corn and bran.	"	ted milk.	Yes
Clearfield No. 4.	Grass.	"	use taint in the milk.	Yes
Johnsonburgh, No. 1.	Grass, middlings and bran.	"		Yes
Star, No. 3.	Grass and corn fodder.	"	It would give a big flow of milk, and I think it would make the milk taint easier.	al
Sharp School-house	Grass.	"	Would cause a floating curd and a poor keeping cheese.	Can

water in the milk to allow the animal heat to escape. Yes, some; cause, not stirring the milk and getting the animal heat out.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- WYOMING COUNTY -- (Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the cause of the same.
Cloverfield, No. 3.....	Grass, bran and middlings.	None.	I think it would make a bad-flavored cheese.	Have had; cause, not dipping and cooling the milk to allow the animal heat to pass off; also from cows drinking putrid water in the pasture.
Cloverfield, No. 17.....	Grass, bran and oats	"	It would make poor, dilute milk that would taint quickly.	Some; cause, improper care; should be dipped and aerated to allow animal heat to pass off.
Cloverfield, No. 24.....	Grass.	"	I don't know; have had no experience with such milk.	Yes; cause, not dipping the milk to allow the animal heat to pass off.
Park .....	.....	"	.....	Yes.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — WYOMING COUNTY — (Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Castle	None.	Fair.....	Very bad ..	Very bad ..	.....
Griffith Corner.....	None.	Good.....	Very good..	Excellent ..	.....
Empire.....	There is a difference; when the milk is received from Holsteins or young cows, but the difference is small, don't know how it can be equalized.	.....	Good.....	Very good..	.....
Silver Lake	None.	Very good.	"	Good.....	.....
Oatra	None.	" .....	" .....	" .....	.....
Gainsville.....	No difference; the milk runs very even at this factory.	" .....	" .....	" .....	.....
Silver Springs	None.	"	"	Fair.....	.....
Bliss Station.....	There is not very much difference; taken on an average would not think of equalizing even at necessary, but being realization, the milk is equalized.	"	"	Very good..	.....
Centennial	would not reason of	"	"	Good.....	.....
Campbell Hill	use equal-	" .....	" .....	" .....	.....
Excelsior .....		" .....	" .....	" .....	.....
East Koy.....		Good.....	Fair.....	Poor .....	.....
Pike Station		"	Good.....	Fair.....	.....
Eagle	None.	" .....	" .....	" .....	.....
South Eagle	None.	" .....	" .....	" .....	.....
Cadwell's Corners.....	None.	Very good.	" .....	" .....	.....
Star, No. 1.....	I see but one way to equalize the value of milk, by testing the milk according to the quality, but don't favor equalization.	Good.....	" .....	" .....	.....
Wing Street.....	No difference, but think that the milk from a Jersey cow would be worth more than the milk from a native or grade.	"	"	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888.—WYOMING COUNTY—(Continued).

NAME OF FACTORY.	With regard to difference in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Johnsonburgh, No. 2.....	No difference; would not favor equalization.	None.....	Good.....	Fair.....	.....
Wetherfield Springs.....	None.	".....	".....	Excellent..	.....
Hermitage.....	None.	".....	".....	Good.....	.....
Arcade Centre, No. 8.....	No material difference, would not advise equalization.	".....	".....	".....	.....
J. B. Lewis No. 7.....	None.	".....	".....	".....	.....
Star, No. 2.....	None.	".....	".....	".....	.....
Java Centre, No. 9.....	None.	".....	".....	".....	.....
Cloverfield, No. 12.....	None.	".....	".....	".....	.....
Punkshire, No. 10.....	None.	".....	".....	".....	.....
Johnsonburgh, No. 12.....	None.	".....	".....	".....	.....
Johnsonburgh, No. 11.....	None.	".....	".....	".....	.....
Java Lake.....	None.	".....	".....	".....	.....
County Line, No. 11.....	None.	".....	".....	".....	.....
Arcade.....	None.	".....	".....	".....	.....
Dale.....	None.	".....	".....	".....	.....
Town Line.....	None.	".....	".....	".....	.....
Orangeville, No. 7.....	There is some difference, but I do not believe it can be adjusted.	Poor.....	First-class.	Very good..	.....
Greene, C. A.....	There is some difference, but I do not think	Good.....	Good.....	Fair.....	.....
Flatt's Branch, No. 8.....		".....	".....	Good.....	.....
Boales.....		Poor.....	".....	Poor.....	.....
Excelsior, No. 6.....		Good.....	".....	Good.....	.....
Johnsonburgh, No. 3.....	to	".....	".....	".....	.....
Attica.....	it	".....	".....	".....	.....
Johnsonburgh, No. 5.....	w	".....	".....	".....	.....
East Bennington.....	se	".....	".....	".....	.....
Rekstein.....	k	".....	Favorable..	".....	.....

yet as all are contented with the present system I will not suggest any change.

Pany.....	There is a difference, but do not know how it can be adjusted.	"	Good.....	"	.....
Strykersville.....	None.	Very good..	"	"	.....
Sheldon.....	None.	Good.....	"	"	.....
Cloverfield, No. 14.....	There is some difference, but not enough to raise any question.	"	"	"	.....
Toaster, No. 5.....	I do not find much difference in the quality of milk.	"	"	"	.....
Clearfield, No. 4.....	Think the milk varies some in quality, not enough to raise the question of quality	"	"	"	.....
Johnsonburgh, No. 1.....	but I do not the question. intended with	Very good..	"	Not the best	.....
Star No. 3.....	It is not worth while to try to equalize it, I know of no way.	Good.....	"	Good.....	.....
Sharp School-house Cloverfield, No. 3.....	No material difference.	Very good..	"	"	.....
Cloverfield, No. 17.....	but my patrons resent way, and I	Good.....	"	"	.....
Cloverfield, No. 24.....	but I don't think	Poor.....	Very good..	"	.....
Park.....	estion before my	Good.....	Good.....	"	.....
	but I don't think	Perfect.....	Favorable..	"	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 — YATES COUNTY — (Continued).

NAME OF FACTORY.	Town.	When inspected.	Product of factory.	Average time operating factory, in months.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.			
								Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.
Kenny Dairy Farm.....	Potter.....	Oct. 15	Cheese.....	6	3	30	400	...	.....	.....	...
Henry Seldel.....	Potter.....	15	"	2	10	40	600	...	.....	.....	...

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—YATES COUNTY—(Continued).

NAME OF FACTORY.	Kind of cheese. manufactured.	Average weight of cheese.	CHEESE.					Breed of cows.
			Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price re- ceived for cheese.	Do you favor State brand?	
Kenny Dairy Farm.....	Colored; full cream...	35	1	10,000	9½	10	Yes...	Natives, grades and Durhams.
Henry Seidel	Full cream	30	2	1,000	10	10	No....	Common and grades.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—YATES COUNTY—(Continued).

NAME OF FACTORY.	Feed used by patrons.	With regard to feeding whey.	The effect of feeding whey, on milk.	With regard to tainted milk and the causes of the same.
Kenny Dairy Farm	Grass, feed and bran.	None.	.....	Not dipping so as to cool and aerate the milk in warm evenings; also not leaving it exposed to the air, so the animal heat may pass off.
Henry Seldel	Grass, bran and corn.	"	If whey was fed to cows producing the milk for cheese, the cheese made from such milk would be acid, puffy, and would sour after a short time.	Yes; cause, do not know, but think it was neglect to dip and aerate the milk.

ABSTRACT OF FACTORY INSPECTIONS FOR 1888 -- Yates County -- (Continued).

NAME OF FACTORY.	With regard to differences in the value of milk, if any, and how this difference can be equalized or adjusted.	Miscellaneous.			Remarks.
		Condition of factory.	Location and surroundings.	Drainage.	
Kenny Dairy Farm.....	I have tested the milk here from the different in its a any think qual-	First-rate	On high ground.	First-class.	.....
Henry Seidel.....		Good.....	On high ground.	Good.....	.....

ABSTRACT OF FACTORY INSPECTIONS FOR 1888—RECAPITULATION—(Concluded).

COUNTIES.	Number of factories.	Average cows in each factory.	Number of patrons.	Number of cows.	Number of pounds of milk received daily.	BUTTER.				Average weight of cheese.	CHEESE.			
						Number of pounds of butter made daily.	Estimated amount of butter made during the season.	Number of pounds of milk required for a pound of butter.	Average price received for butter.		Number of cheese made daily.	Estimated number of pounds made during the season.	Number of pounds of milk required for a pound of cheese.	Average price received for cheese.
Allegany	85	316	2,506	26,935	418,985	.....	.....	.....	.....	56 73-100	8 75-100	8,464,800	10 5-100	8 78-100
Broome	16	385	479	6,166	57,200	1,995	239,900	38 3-13	22 3-12	47 4-10	9 5-10	761,720	10 2-10	7 7-10
Cattaraugus	115	316	2,734	36,432	598,298	375	40,000	24 ½	22 ½	57 74-113	8 5-10	11,399,765	9 76-100	9 4-100
Cayuga	11	290	397	3,200	43,800	440	65,500	47 ½	22 ½	54 7-9	7 7-9	559,200	9 8-9	8 8-9
Chautauque	93	325	2,674	30,235	398,029	7,865	1,441,543	22 ½	23 2-28	56 36-63	7 14-63	4,318,400	10	7 22-63
Chemung	16	351	447	5,620	137,048	3,625	796,325	23 1-16	25 11-25	31 8-10	7 4-10	452,970	16 5-10	3 5-10
Chenango	42	374	966	15,742	246,128	5,582 ½	1,282,477	37 36-37	22 21-37	47 ½	10 4-5	3,588,445	12 1-20	6 11-13
Columbia	1	.....	.....	.....	300	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cortland	33	287	648	9,475	147,883	4,068	574,000	29	28 1-16	51 14-27	7 16-27	1,810,566	11 1-12	8 ½
Delaware	16	371	383	4,830	90,700	3,300	569,840	28 ½	24 ½	41 9-11	10 5-11	388,135	13 8-11	7 1-7
Erie	65	283	1,721	18,420	201,508	226 ½	33,000	69 6-10	18 83-100	53 8-10	7 72-100	6,183,300	10 6-10	9 4-100
Fulton	3	117 ½	44	235	5,100	150	.....	.....	26	57	3 ½	75,000	10	8 ½
Genesee	10	278	395	2,788	22,621	370	54,500	26	17	62 5-9	5 6-9	504,200	10 1-9	10 2-9
Herkimer	99	362	1,783	35,661	736,691	511	75,000	93	21	56	13	8,470,500	9 98-100	8 8-9
Jefferson	41	415	1,070	17,030	318,241	479	82,603	46	21	68 17-39	12 7-18	2,709,032	10 17-100	8
Lewis	65	448	1,454	26,922	620,571	240	33,200	25 5-10	11 5-10	57 7-64	13 11-64	6,926,186	9 19-20	8 12-13
Livingston	2	390	108	780	10,400	.....	.....	.....	.....	60	9	196,000	10	8 ½
Madison	60	307	1,374	18,429	291,203	3,397	520,365	43 5-100	23 7-10	53 17-49	9 1-7	4,163,800	10 97-100	7 72-100
Monroe	2	275	84	550	2,300	100	45,000	.....	25	45	5	30,500	10	10
Montgomery	35	302	757	9,370	176,840	500	21,777	83	23	58 14-33	8	2,724,848	10 18-100	8 7-10
Niagara	2	325	81	650	3,000	325	35,000	.....	22	40	5	26,000	10	10
Oneida	69	468	2,219	32,169	508,357	440	64,000	85	22	57 78-100	16 12-100	8,564,415	10 24-100	9 61-100
Onondaga	11	263	281	2,626	45,300	235	60,400	84	22 ½	54 8-11	7 2-11	872,360	10 8-11	8
Ontario	5	328	232	1,640	.....	861	178,000	.....	24 ½	50	3	37,600	10	9 ½
Orleans	2	183	39	366	836	800	40,750	25	22	40	6	37,482	10	10 ½
Oswego	37	465	1,720	17,290	387,396	461	72,500	100	20	61 34-37	13 21-37	4,092,991	10 ½	8 25-29
Otsego	45	335	1,033	14,063	133,212	3,360	608,134	83 ½	22 76-100	40 14-41	11	8,240,024	11 1-13	7 13-28
St. Lawrence	80	497	2,157	39,766	536,167	2,580	1,313,549	24 14-100	22 33-100	66 23-100	11 ½	7,503,614	10 38-100	8 83-100

Schenectady	1	.....	11	90	1,500	.....	.....	.....	.....	55	8	.....	10%	8½
Schuyler	4	86½	55	345	4,820	75	27	22	.....	33½	4	68,800	12	7½
Seneca	1	100	7	100	2,000	90	25	25	2-5	40	1	7,300	10	12
Steuben	19	363	469	4,749	36,457	555	.....	25	2-5	56	3½	1,078,000	9	9 28-100
Tioga	9	354	279	3,190	21,000	2,095	23	22	3-5	45	7	145,000	11½	7½
Tompkins	5	345	157	1,725	36,400	230	24	23	3-5	52	11	1,493,600	10	8
Wayne	4	271½	211	1,085	5,400	175	.....	21	.....	55	3½	81,000	10	10½
Wyoming	57	337	1,808	19,215	286,319	7	212	12	.....	58	11	5,336,250	10	8½
Yates	2	35	13	70	1,000	.....	.....	.....	.....	32½	1½	11,000	9½	10

From the foregoing tabulated statement, it will appear that we visited the counties above-mentioned and inspected as many of the factories and creameries as could be conveniently reached.

The dairy statistics of those several counties are as follows :

ALLEGANY COUNTY.

In Allegany county we visited and inspected 85 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 26,935 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 84,215,985 pounds.

The average number of cows per factory was 316.

The average amount of milk per cow, delivered during the season, was 3,142 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{5}{8}$ pounds.

BROOME COUNTY.

In Broome county we visited and inspected 16 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 6,168 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 12,240,800 pounds.

The average number of cows per factory was 385.

The average amount of milk per cow, delivered during the season, was 1,984 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{2}{3}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $38\frac{2}{3}$ pounds.

CATTARAUGUS COUNTY.

In Cattaraugus county we visited and inspected 115 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 36,432 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 150,771,096 pounds.

The average number of cows per factory was 317.

The average amount of milk per cow, delivered during the season, was 4,133 pounds.

The average amount of milk to make a pound of cheese, in this county, was $9\frac{7}{10}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $24\frac{1}{8}$ pounds.

CAYUGA COUNTY.

In Cayuga county we visited and inspected 11 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 3,200 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 7,621,200 pounds.

The average number of cows per factory was 291.

The average amount of milk per cow, delivered during the season, was 2,380 pounds.

The average amount of milk to make a pound of cheese, in this county, was $9\frac{3}{4}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $47\frac{3}{4}$ pounds.

CHAUTAUQUA COUNTY.

In Chautauqua county we visited and inspected 93 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 30,236 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 75,227,481 pounds.

The average number of cows per factory was 326.

The average amount of milk per cow, delivered during the season, was 2,484 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $22\frac{2}{3}$ pounds.

CHEMUNG COUNTY.

In Chemung county we visited and inspected 16 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 5,620 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 23,015,960 pounds.

The average number of cows per factory was 351.

The average amount of milk per cow, delivered during the season, was 4,095 pounds.

The average amount of milk to make a pound of cheese, in this county, was $15\frac{1}{2}$ pounds. (Proportion of skimmed cheese factories is large.)

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $25\frac{1}{3}$ pounds.

CHENANGO COUNTY.

In Chenango county we visited and inspected 42 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 15,742 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 46,518,192 pounds.

The average number of cows per factory was 375.

The average amount of milk per cow, delivered during the season, was 2,955 pounds.

The average amount of milk to make a pound of cheese, in this county, was $12\frac{1}{10}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $37\frac{3}{4}$ pounds.

COLUMBIA COUNTY.

In Columbia county we visited and inspected the creamery situated at Chatham, operated by "The Columbia County Creamery Company." The methods pursued at this establishment in the manufacture of butter are elsewhere given.

CORTLAND COUNTY.

In Cortland county we visited and inspected 33 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 9,475 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 28,837,185 pounds.

The average number of cows per factory was 288.

The average amount of milk per cow delivered during the season was 3,043 pounds.

The average amount of milk to make a pound of cheese, in this county, was $11\frac{1}{2}$ pounds.

In those creameries or factories where butter was made the average amount of milk to make a pound of butter was 29 pounds.

DELAWARE COUNTY.

In Delaware county we visited and inspected 16 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 4,830 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 17,006,250 pounds.

The average number of cows per factory was 371.

The average amount of milk per cow delivered during the season was 3,520 pounds.

The average amount of milk to make a pound of cheese, in this county, was $13\frac{2}{3}$ pounds.

In these creameries or factories where butter was made the average amount of milk to make a pound of butter was $28\frac{2}{3}$ pounds.

ERIE COUNTY.

In Erie county we visited and inspected 65 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 18,420 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 41,107,632 pounds.

The average number of cows per factory was 284.

The average amount of milk per cow delivered during the season was 2,231 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{6}{10}$ pounds.

In those creameries or factories where butter was made the average amount of milk to make a pound of butter was $69\frac{3}{4}$ pounds.

FULTON COUNTY.

In Fulton county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 235 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 877,500 pounds.

The average number of cows per factory was $117\frac{1}{2}$.

The average amount of milk per cow delivered during the season was 3,724 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

GENESEE COUNTY.

In Genesee county we visited and inspected 10 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 2,786 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 4,953,999 pounds.

The average number of cows per factory was 279.

The average amount of milk per cow, delivered during the season, was 1,419 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{1}{4}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 26 pounds.

HERKIMER COUNTY.

In Herkimer county we visited and inspected 99 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 35,661 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 159,125,256 pounds.

The average number of cows per factory was 362.

The average amount of milk per cow, delivered during the season, was 4,462 pounds.

The average amount of milk to make a pound of cheese, in this county, was $9\frac{28}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 93 pounds.

JEFFERSON COUNTY.

In Jefferson county we visited and inspected 41 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 17,030.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 59,192,826 pounds.

The average number of cows per factory was 416.

The average amount of milk per cow, delivered during the season, was 3,475 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{17}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 46 pounds.

LEWIS COUNTY.

In Lewis county we visited and inspected 65 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 26,922 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 89,027,541 pounds.

The average number of cows per factory was 448.

The average amount of milk per cow, delivered during the season, was 3,306 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $25\frac{1}{2}$ pounds.

LIVINGSTON COUNTY.

In Livingston county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 780 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 2,028,000 pounds.

The average number of cows per factory was 390.

The average amount of milk per cow, delivered during the season, was 2,600 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

MONTGOMERY COUNTY.

In Montgomery county we visited and inspected 35 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 9,370 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 33,422,760 pounds.

The average number of cows per factory was 302.

The average amount of milk per cow, delivered during the season, was 3,567 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{18}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 33 pounds.

MADISON COUNTY.

In Madison county we visited and inspected 60 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 18,429 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 102,416,540 pounds.

The average number of cows per factory was 307.

The average amount of milk per cow, delivered during the season, was 2,854 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{27}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $43\frac{8}{100}$ pounds.

MONROE COUNTY.

In Monroe county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 550 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 2,626,500 pounds.

The average number of cows per factory was 275.

The average amount of milk per cow, delivered during the season, was 3,910 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

NIAGARA COUNTY.

In Niagara county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 650 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 2,145,000 pounds.

The average number of cows per factory was 325.

The average amount of milk per cow, delivered during the season was 3,900 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

ONEIDA COUNTY.

In Oneida county we visited and inspected 69 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 32,169 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 94,550,402 pounds.

The average number cows per factory was 466.

The average amount of milk per cow, delivered during the season was 2,949 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{24}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 35 pounds.

ONONDAGA COUNTY.

In Onondaga county we visited and inspected 11 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 2,536 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 8,425,800 pounds.

The average number of cows per factory was 254.

The average amount of milk per cow delivered during the season was 3,322 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{8}{11}$ pounds.

In those creameries or factories where butter was made the average amount of milk to make a pound of butter was 34 pounds.

ONTARIO COUNTY.

In Ontario county we visited and inspected 5 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 1,640 cows.

The average number of cows per factory was 328.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

ORLEANS COUNTY.

In Orleans county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 366 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 1,644,300 pounds.

The average number of cows per factory was 183.

The average amount of milk per cow, delivered during the season, was 4,492 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 25 pounds

OSWEGO COUNTY.

In Oswego county we visited and inspected 37 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 17,230 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 69,731,280 pounds.

The average number of cows per factory was 466.

The average amount of milk per cow, delivered during the season, was 4,047 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 100 pounds.

OTSEGO COUNTY.

In Otsego county we visited and inspected 45 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 14,063 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 25,576,604 pounds.

The average number of cows per factory was 335.

The average amount of milk per cow, delivered during the season was 1,818 pounds.

The average amount of milk to make a pound of cheese, in this county, was $11\frac{3}{8}$ pounds.

In those creameries or factories where butter was made the average amount of milk to make a pound of butter was $33\frac{1}{2}$ pounds.

ST. LAWRENCE COUNTY.

In St. Lawrence county we visited and inspected 80 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 39,766 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 94,901,559 pounds.

The average number of cows per factory was 497.

The average amount of milk per cow, delivered during the season, was 2,383 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{3}{8}$ pounds

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was $24\frac{7}{8}$ pounds.

SCHENECTADY COUNTY.

In Schenectady county we visited and inspected 1 factory and creamery and the milk of the patrons delivered to this establishment.

This factory manufactured the milk of 90 cows.

The total amount of milk delivered to this factory, as estimated for the entire season, amounted to 270,000 pounds.

The average amount of milk per cow, delivered during the season, was 3,000 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{1}{4}$ pounds.

SCHUYLER COUNTY.

In Schuyler county we visited and inspected 4 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 345 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 838,680 pounds.

The average number of cows per factory was 86.

The average amount of milk per cow, delivered during the season, was 2,430 pounds.

The average amount of milk to make a pound of cheese, in this county, was 12 pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 27 pounds.

SENECA COUNTY.

In Seneca county we visited and inspected 1 factory and creamery and the milk of the patrons delivered to this establishment.

This factory manufactured the milk of 100 cows.

The total amount of milk delivered to this factory, as estimated for the entire season, amounted to 720,000 pounds.

The average amount of milk per cow, delivered during the season, was 7,200 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

The average amount of milk to make a pound of butter was 25 pounds.

[This report is from a single factory, and it is possible that there may be errors in the estimates.]

STEUBEN COUNTY.

In Steuben county we visited and inspected 19 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 4,749 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 6,781,002 pounds.

The average number of cows per factory was 264.

The average amount of milk per cow, delivered during the season, was 1,427 pounds.

The average amount of milk to make a pound of cheese, in this county, was $9\frac{1}{3}$ pounds.

TIOGA COUNTY.

In Tioga county we visited and inspected 9 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 3,190 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 5,544,000 pounds.

The average number of cows per factory was 355.

The average amount of milk per cow, delivered during the season, was 1,737 pounds.

The average amount of milk to make a pound of cheese, in this county, was 11½ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 23 pounds.

TOMPKINS COUNTY.

In Tompkins county we visited and inspected 5 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 1,725 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 6,552,000 pounds.

The average number of cows per factory was 345.

The average amount of milk per cow, delivered during the season, was 3,218 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10¾ pounds.

In these creameries or factories where butter was made, the average amount of milk to make a pound of butter was 24 pounds.

WAYNE COUNTY.

In Wayne county we visited and inspected 4 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufacture the milk of 1,085 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 1,101,600 pounds.

The average number of cows per factory was 271.

The average amount of milk per cow, delivered during the season, was 1,015 pounds.

The average amount of milk to make a pound of cheese, in this county, was 10 pounds.

WYOMING COUNTY.

In Wyoming county we visited and inspected 57 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 19,215 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season, amounted to 55,115,334 pounds.

The average number of cows per factory was 337.

The average amount of milk per cow, as delivered during the season, was 2,868 pounds.

The average amount of milk to make a pound of cheese, in this county, was $10\frac{26}{100}$ pounds.

In those creameries or factories where butter was made, the average amount of milk to make a pound of butter was 212 pounds.

YATES COUNTY.

In Yates county we visited and inspected 2 factories and creameries and the milk of the patrons delivered to those establishments.

These factories manufactured the milk of 70 cows.

The total amount of milk delivered to all these factories, as estimated for the entire season amounted to 120,000 pounds.

The average number of cows per factory was 35.

The average amount of milk per cow, delivered during the season, was 1,714 pounds.

The average amount of milk to make a pound of cheese, in this county, was $9\frac{3}{4}$ pounds.

It appears, also, that in all these factories so visited, taken together, there was received for manufacture the milk of 407,810 cows, estimated to amount during the season to 1,237,370,427 pounds.

The average number of cows whose milk was received at each factory was 350; and the average number of pounds of milk received was 1,064,938 pounds.

The average number of pounds of milk per cow from this entire region was, as estimated, 3,034.

The average amount of milk to make a pound of cheese was $10\frac{6}{100}$ pounds.

The average amount of milk to make a pound of butter was 25 pounds. This milk was delivered by 30,746 different patrons.

These inspections cover a very large extent of our dairy territory and embrace such a large variety of conditions pertaining to the dairy business, and give such an amount of statistical and other information obtained from the most reliable sources available, that it will be probably safe to assume that there is furnished thereby a good, fair basis for estimating the results of dairying throughout the entire State. The errors, if any, from incorrect estimates will probably so balance each other as to make the results, as given, substantially correct.

A study of the large amount of facts and figures collected by this department, relating to the great dairy industry of the State, makes apparent what has long been felt to be the case, that there is a lack of the proper observance of the true principles underlying successful dairying, and that the amount of milk produced by the average cow, and the income from the same, is far below what it should be. This condition of things accounts, in a large measure, for the frequent applications made for legislation intended to aid our dairymen. We have, therefore, endeavored to point out in this report some of the existing errors and to suggest remedies, hoping it may be of use to your honorable body whenever, in the future, legislation on this subject may be sought.

POUNDS OF MILK FOR A POUND OF BUTTER—A SHOWING WHICH SHOULD BE REDUCED—COWS FOR A SPECIAL PURPOSE—LACK OF BUTTER FATS.

The best average showing of the average number of pounds of milk required for a pound of butter, as reported by the butter factories, is a little over twenty-four pounds. Where the milk is skimmed with only twelve hours setting in the cheese vats, about twice as much milk is required to get a pound of butter. The reasons for this are obvious; the milk is set in too great a quantity, and not nearly all the cream is likely to come to the surface on account of the bulk and the short time for rising, and the lack of rapid cooling. In one butter and skim-cheese factory, where the milk is set in small cans in a tank of cold water, and but little milk in a can, so that all the cream rises before the milk begins to

get sour, the amount of milk required for a pound of butter is twenty-four pounds. This is a little less than the general average, which may be safely put at twenty-five pounds for all butter factories, and probably nearer thirty pounds for the general average of the State, including all dairies where milk is set for cream-rising and butter-making. Twenty-three factories, where skim-cheese is made, report fifty-one as the number of pounds of milk required for a pound of butter. Of course, at such establishments, only a portion of the cream is obtained, the balance being made into cheese. The conditions of temperature are such, in hundreds of instances, together with other considerations, that the milk gets sour before the cream rises, and the proportion of milk must be increased. Poor cows and poor feed are great drawbacks. If all of the adverse or non-paying conditions were absolute necessity, any further consideration of the matter would be of no avail. We know that this is not so. Skillful dairymen, by a judicious selection of their cows, have reduced this ratio of milk, as to butter, about one-half below the general average. What they have done others can do. The cows must be selected for their adaptation to the purpose required. Butter cows must be put into the butter dairy, and they must be fed foods adapted to increase the butter fats. It is the butter fats in the milk which make the rich cream which, in its turn, produces the butter. Not all farmers can purchase thoroughbred cows, nor need all farmers do this. There is a cheaper way, and one entirely practicable, whereby the benefits of prepotency of blood can be obtained, to wit: By the using of males which have valuable ancestral records of utility in the dairy. The native cows, which have been tested and are known to be valuable, should be kept in the herds and made the mothers until others better than they are bred. This subject is one of such great importance, as the cow must needs be the most important factor in the dairy, that I must dwell upon it to the extent of at least endeavoring to excite more thought and care in the selection of the cows and to furnish the Legislature with some of the facts which bear on the subject and which are of great interest and importance. Any farmer can use the improving benefits, in his dairy, of selection. This is the opposite of costly. It is remunerative. The past summer, under the

auspices of the New York Dairymen's Association, several notable dairy conferences were held, where the benefits of selection were shown and also breeding for a purpose. In Delaware county a conference was had where a test was made by the open setting of milk from well-selected cows, and it took twenty-two and a half pounds of milk to make a pound of butter. This was on the farm of Mr. Abell in Franklin. At Mr. Merrett's, the cows also being carefully selected, under the submerged system, a pound of butter was made from nineteen and a half pounds of milk.

These are certainly paying reductions. At Kirly homestead, in July, the average was sixteen and one-half pounds of milk for a pound of butter, and at the dairy at Cornell university fifteen and one-half. The cows at Kirly homestead were all Jerseys, but the conditions were not as favorable as at Cornell, and the special feeding was not so strong, being only about half the bran and cottonseed meal to a cow. I mention this fact as it enforces the argument that there must be a purpose, and when it is carried out it will result in good. There is no doubt in my mind but that fully one-fourth of the cows kept in the butter dairies do not pay any profit, and, perhaps, one-eighth make an actual loss. This is an additional reason why the percentage of milk required is so large, as the cows either do not give milk enough for profit or it is lacking in butter fats. An analysis of the milk of some of the prize cows, at a recent fair, showed, in one case, only a fraction over ten per cent of solids, and the best one but twelve per cent, which is the standard required in this State. Another cow had but a point over eleven per cent. Such cows would make a questionable showing in a butter dairy for profit. If a cow is unfitted to manufacture her food into milk, and to enrich it with a proper proportion of solids, her nature can not be changed by special feeding, but if a cow has the requisite functions or development to do this work, then the propensity can be stimulated and she can be made to do a greater work by giving her the right kind of food. This principle is made use of by those persons who undertake to make large tests of cows, and by a special feeding for a length of time an abnormal yield is produced. It may be done at the expense of continued good health, and the animal may be broken down if it is carried to excess.

I do not recommend excessive feeding, but liberal feeding and a selection of foods which will fill the blood with albuminoids or material to be converted into the solid elements of milk. This subject of selection and combination of foods is now attracting marked attention with all skillful and successful dairy-men. I am satisfied that foods and care may be so managed as to produce a double return over the average, as too many dairy-men now conduct affairs. I shall refer to foods for a purpose, and the results which may be obtained under the head of feeding for butter and cheese. I am satisfied that there is a vast unnecessary waste of vitality and consequent loss of ability to secrete milk rich in quality because of needless exposure of cows to the cold in winter. The first law of nature is self-preservation, and the cow, turned out into the cold, will keep herself warm regardless of milk pails and butter tubs ; even to the extent of using up all the fat in her body and all of the animal substance, except her bones and skin and attenuated muscles. Salt is a necessary factor for the health of animals. It should be given to them, so that they can follow their instincts in its use. If given at irregular intervals or in any manner so that an excess in amount may be eaten, it will produce a derangement of the stomach. A little salt is a promoter of appetite and digestion. Too much acts as an irritant, and an undue portion as a poison.

**POUNDS OF MILK FOR A POUND OF CHEESE — CAN
THERE BE A REDUCTION ? — ADAPTATIONS OF
COWS AND FOODS — MORE SOLIDS WANTED.**

There is a corresponding lack of solids in the average milk taken to the cheese factories to be manufactured into cheese, as well as butter fats. It is demonstrated by the tables gathered by inspectors who visited the factories in person, that in one of the best and most successful cheese districts it required 10.26 pounds of milk on an average to make a pound of cheese ; while in other portions of the State where the milk was part skimmed, 13.45 pounds were required on an average to make a pound of cheese. The grand total average, taking all the factories in the State from

which returns have been received, gives the average number of pounds of milk required for a pound of cheese to be $10\frac{2}{100}$, as nearly as could be estimated from the data received.

It is a practical question, and one of great importance to know, if it is possible to make milk which will produce a larger percentage of cheese. An excessive volume of water is not what is required. It is the solids. I have said that the nature of the cow can not be changed. Food will not supply physical functions. It will not create milk glands nor add to the mammalian organs; but it will furnish them with needful nutriment and stimulate them to a larger and more profitable development. The cow machinery should not be driven beyond its capacity; but it will do no injury to push it to a full working limit. How many dairymen actually stint their cows the greater part of the year. They have no right to expect full results. If it is unwise to over-feed, it is equally improvident to under-feed, or to compel the cow, for lack of feed, to afford sustenance, to draw from the material stored in her body. This must be the case, whenever there is a lack of any one element; or else nature must, by force of her peculiar laws, change foods of one order to fill the place, as far as may be, of foods of another character. This is the case whenever an excess of carbonaceous foods is given and there is a lack of nitrogenous. Nature will endeavor to make bone and muscle out of carbohydrates or even carbon. With an excess of nitrogen nature's laboratory immediately sets to work to elaborate some of the flesh-forming substance into heat and fat, in order that life and locomotion may be sustained. It is fortunate that nature does adapt itself to circumstances to a considerable extent, or there would be more serious results. Science has not yet told us of any special cheese or casine food, but it is an admitted fact that rich milk makes rich cheese and that rich, melting cheese can not be made from any other quality of milk. How far science may discriminate in the future in regard to special foods for cheese, and special foods for butter, remains to be seen.

It is a line of investigation which experimental stations have very properly begun, and when a correct and economical basis is

fully established it will be of vast advantage to both the producer of cheese and the consumers of the same.

If the milk shall be specifically charged in the crucible of the cow with the elements of quantity and quality for cheese as well as butter, the possibilities of improvement are most gratifying and encouraging. The sooner this important work is fully developed by continued wise legislation, the better. For the time being we should avail ourselves of such knowledge as we have in regard to the conditions of the cows and their foods. The average dairyman has thus far given this subject very little attention. He is at a standstill. The men who sell milk in the city and village markets have carried on a system of food experiments to increase the yield of milk until they have, in many herds, stretched the secretion to the very verge of legal limit as to its solids. The physiological law is patent that washy and light foods will induce greater secretion of fluids, and the milk vessels come in for their share. I am satisfied that the reverse law is true, but not to the same extent as the law for promoting the secretion of water in milk. Perfect digestion and assimilation are necessary to formulate or produce solids in milk or to eliminate them from the food. To do this effectually the physical laws governing the care of the animal, its comfort and its health must not be violated. How often and how general these laws may be or are violated, dairymen know better than I do. They can never be tampered with without loss. The formation of and secretion of the solids of the milk are the results of the most perfect conditions and the work of the most delicate and intricate machinery. For these reasons due regard must be had to the maintenance of a normal nervous equilibrium. Fright, excitement and over-exertion will all conduce to the using up of life and nerve force, which will draw from the solid side of the food supply. If a test should be made by analyzing the milk of the highstrung, nervous cow, with the quiet and more docile one, the largest credit would be given to the latter. The subject of feeding for solids and feeding for general production are so closely interwoven that it is difficult to divide them or to make close discrimination. It is a mistaken notion that any kind of milk will make a good cheese.

INSPECTION AND TESTS.

If it were possible to inaugurate a system of inspection, whereby the actual amount of solids in milk could be determined at least once a week and the milk be thus credited, there is no doubt but that the ratio of milk as to cheese would speedily be reduced.

Experiments are now being made under the direction of this department in the hope and with some encouragement that such a result may be accomplished. By present custom the dairyman is credited with the number of pounds of milk, regardless of quality, and he gets his proportion, *pro rata*, of the cheese made from the whole. This virtually rewards and encourages the production of poor milk. If, however, a general rule in feeding prevailed it would tend very much to make more uniform the value of the milk. There must be, with an average dairy of cows, as much again cheese material—solids—in a herd fed on good grass and suitable grain from one fed principally on sowed corn, as it is usually grown. This food is excessively washy and weak in nutriment. Farmers imagine that a large volume of milk must necessarily make a proportionate amount of cheese, still they know better, for they are aware that in the autumn, when the milk is less in quantity, that it takes fewer pounds of milk to make a pound of butter. Now, if this fact could be applied to the whole season by proper feeding, would it not be wise? The idea is to feed for quality, rather than quantity. It is true, that when the quantity is cut off by drought that no more cheese is made *pro rata*; but this does not upset the argument, as the solids in the milk obtained are no more, and, in fact, more often they are less. This arises from the fact that the nutriment is either dried out of the grasses, or that the cows, getting an insufficient amount of food, have little surplus of the elements which make the solids, nitrogen, carbon and the phosphates, beyond what their own bodies require, and so the amount of cheese is diminished. It is an established law that cows, when giving milk, require as much again water as they do when dry, and this excess seems to be necessary in order that there may be a perfect elimination of nutritive elements and all the physical machinery be kept in good

working condition. For the present it seems to me that there should be but little discrimination between feeding for cheese and feeding for butter. The great practical want in the factory system, in our State, is a greater uniformity in all the factors of that system, so that all may fare and share alike. This is a practical matter which investigating and pushing minds are constantly bringing up, and it tends to create uneasiness and dissatisfaction. To my mind the benefits of coöperation in both butter and cheese factories are so great that all minor questions of this sort should be held in abeyance until such time as relief from present conditions may be afforded as a result of experimentations and scientific research, but, at the same time, every patron of such manufactories should be willing to coöperate with the others in all reasonable efforts to secure desirable and equitable results. All want better results. How shall we get them? Certainly not by persisting in a method of dairying which tends to fill milk vats with an undue proportion of water. There should be a large reduction in the average. This is a line of enterprise which will build at both ends. It carries with it more cheese, better cheese, and more fertility to the farm. A cow fed so poorly that it takes 30 pounds of her milk to make a pound of cheese is not a factor to enrich the farm. The foods which swell the per cent of solids will also increase the ration of food as to fertility. They always go together. The foods which barely sustain life do not afford scarcely any surplus for sustaining the farm. Such manures are scarcely worth the handling.

Emaciation from whatever cause is very destructive of the elements which make solids. Foods must first sustain life, next supply the needful material to make up for wastes, and lastly be utilized in the animal economy for production. Milk and its constituents come under the last head. Where there has been exposure to use up vitality or a want of food such as to cause loss in flesh, by an inevitable law of self-preservation the nutritive elements of food will be directed to sustain nature. Dairymen too often neglect their stock in winter, or furnish them with food so weak that the whole body is depleted, and it takes a long time for them to recuperate; that is, to eke out from their food aliment

sufficient to restore the physical system to a condition so that only enough material is absorbed from their food to fill the two first requirements of nature, life and its compensating waste, leaving the balance for production. To reach the highest order of attainment in these respects there must be, in the first place, a vigorous condition and an abundant supply of food. While the cow is carrying her unborn calf there are greater drafts made on the food supply, and if the proper elements are not supplied she will take them from her own body. This condition of things will produce rapid emaciation, which must be supplied from her food afterwards before she will be of any profit in the dairy. The milk from cows poor in flesh and weak in body is always lacking in solids, and will make but little cheese or butter; hence it will be seen that it was wise in the Legislature to establish a legal standard of milk solids of at least twelve per cent, and to lower that standard the slightest would be injurious to the dairy interest of this State in every aspect of the case. It has had an elevating and stimulating influence in improving the quality of the milk of this State. A cow which has a tendency to convert her food into animal fat is not a profitable cow. Such cows are too common in dairies. A beef cow is, therefore, never a model cow. The milk of such a cow will lack in solids. As I observe dairies, the course of crossing and breeding is too much in this line of meaty cows. It is a weakness to admire the cows with beefy developments. Calves designed for the dairy should not be fed as veals, but be given foods which will make muscle, tissue and bone. I am sure that it is a damage to heifer calves to rear them as fat as many do. This course of feeding tends to develop and promote beefy qualities and to unfit them for the different end — the dairy. The calves designed for milkers should be reared on skim-milk, bran, linseed meal, oats and clover hay. These foods are not only more healthy than barley, rye, corn and timothy hay, but they will make frame or body and more fully develop the internal organs, which will be useful in after life. There is such a thing as prepotency in foods, as they shape the future nature and form of the animal. To sum up this matter, we can feed the young bovine for either object, the dairy or the shambles.

FEEDING FOR BUTTER AND CHEESE — PERMANENT PASTURES — NATURE OF FOODS — ADVANTAGE OF SUCCULENCE — COMFORT.

There is no food better adapted to the making of good milk than natural pasture; by this term I mean those grasses which are natural to the soil. They contain all the elements of perfect food, and are, therefore, better suited to make growth or production than pastures where only one or a limited number of grasses are produced. It is plain then, that where pastures can be made permanent, or be kept up for a number of years, that the best quality of both cheese and butter can be obtained from them. There are many millions of acres of what may be termed permanent pastures in New York State, and it is good husbandry to keep them so. It is equally true that these pastures do not afford the support for animals they once did, many of them are becoming quite bare and the actual soil is becoming less year by year. This soil depletion is a matter of immense importance, as your honorable body can readily see, for it embraces the future agricultural prosperity of the State. I am satisfied that with dairying in some form there is better opportunity to restore lost fertility, and to maintain the present productiveness of the lands in any other branch of farming. There are less of the elements of fertility abstracted from the soil and lost to the farm in the sale of dairy productions than in any other way. It is well known that nitrogen ammonia, phosphoric acid and potash are the chief constituents for plant growth, and when the milk is kept on the farm and fed to animals the loss of the above elements in a ton of butter sold is only about sixty-two cents worth, as nitrogen ammonia, phosphoric acid and potash can be purchased in the market. One ton of butter contains 2.70 pounds of nitrogen, 1.58 pounds phosphoric acid and one pound of potash. The ammonia is produced from the nitrogen by its combination with water and oxygen, hence it is not mentioned specially in the analysis. There is no crop or production which really depletes the soil less than butter, hence it is the best for the farmer to produce if he wishes to promote fertility on his farm. The keeping of swine is a natural association, in a

business point of view, with the dairy, and in no way can they be kept so well and so perfectly as in connection with a butter dairy, and in no way can the keeping of animals be made more compensatory as an aid in promoting fertility than in the keeping of hogs. The depreciation to the farmer caused by the sale of a ton of cheese is of nitrogen 112 pounds, 17.85 pounds of phosphoric acid and 215 pounds of potash, worth in the markets twenty dollars and fifty-nine cents. When the whey is returned to the farm, there is carried back in a ton ; of nitrogen, 2.72 pounds ; phosphoric acid, 1.84 pounds, and potash, 5.67 pounds, worth one dollar and eighty-two cents. This is a part restoration of plant food, and it is of considerable importance in the economy of the dairy system. When the milk is sold there is a more rapid depletion as will be seen, as a ton of full milk contains by analysis ; of nitrogen, 12.02 pounds ; of phosphoric acid, 4.50 pounds, and of potash, 2.55 pounds. When cows are reared in part in the permanent pastures and sold from the farm there is also a loss of valuable plant food to the pasture, and nitrogen and the phosphates of five or six dollars worth. If the cows, or other stock summering upon the pastures, are fed no extra food, there can be no manurial elements put upon the land, except that which came out of it. The grass grows, and is eaten, and the portions not made into milk and used up in the animal economy are left upon the field, except the portions scattered along the way to the milking yards or stable, and voided in the night while the cows are out of the fields. It is plain then that but little of the elements of plant food grown in the permanent pasture are returned directly, or at all, to it under the system so much in practice in our State. Another important violation of nature's laws is continually occurring, and that is by the close cropping or feeding of the grass there is no deposit of humus, or vegetable matter, at the end of the season on the surface to replenish the soil, or to add to its capacity, and so, year by year, the accrued soil is transformed into new vegetable growth without any return, except the little manure deposited in the shady places, or in the fence corners and the benefits of vegetable mold and soil surface are not felt. After a while there is no soil left and barrenness follows, or a condition bordering so closely upon it that there is no profit. It is a lamentable fact

that there are many localities in our State where absolute barrenness now exist, so far as any kind of farming is carried on. It is an important question. Was this a necessity? Is it a necessity that the millions of acres now being rapidly depleted shall be brought to the same ruinous condition? I think not. The legislature will see that there must be an awakening of the people, and needful instruction given to turn them from present ways into new and more scientific methods of managing pastures and farms; so that there shall be an increase of soil fertility, instead of soil exhaustion. The value of farming lands is now on the decline and if this loss can be turned to a rise in value, by any action of your honorable body, it is plain that it is wisdom so to act. Science teaches how rapidly soil depletion can take place, and it also tells us how it may be obviated. The work of the dairy instructors has been eminently useful in this connection, as the instructors have covered this ground in discussing dairy matters, as well as in the practical demonstration of superior methods in butter and cheese making. It is plain that plant food must be returned to the pastures in some form to take the place of that removed; or there will be, must be, constant loss. The same care applies to the meadows. These last are generally partially restored in their losses of plant food by a rotation of crops which does not admit of such rapid depletion, as by the growing of a single or special crop. A rotation with clover brings from the understrata of the ground, nitrogen and other plant foods, which the long roots of the clover reach after and carry to the surface in the form of the haulm, the root crown and the roots themselves, where in time they decay and furnish plants of less root expansion with extra food. Pastures are grazed too closely. There should always be time given in the latter part of the season for the grass to grow enough to make a protection to the crowns of the roots, and also to make a small deposit of humus on the surface which will be so much soil added. I commend rotation of crops with^o dairying, and also the growing, in this system, of the crops specially adapted to the making of rich milk. Rotation gives the land rest, and as all crops vary in the amount and elements of plant food required by them, there is not such a ceaseless demand made upon the soil

for the same constituents, and there is a seeming recuperation. Even with a continuous rotation of crops there must be a return of manure to the land or exhaustion is inevitable. It may come slower, but it is sure. The average yield of milk per cow, as shown by the extensive list of reports herewith presented, is 3,034 pounds.

This discouraging yield is due, in greater part, to the scarcity of food the cows have, not only in winter, but also during most of the season. In the early spring, up to July, there is usually a flush of feed, but, as I have shown in this report, a considerable part of this food is required to make up and to restore the emaciated condition of body caused by scanty food, or food not properly mixed, and for unnecessary exposure to the cold. By the time a full, vigorous and restored physical condition is obtained, there begins a shortage of feed, as the dry weather and hot sun cut the grass short. The flies also prey on the cows and deplete them by loss of blood, and in the vain attempts to hide from them the feeding time in the fields is shortened. In the autumn the average farmer relies on the picking of fields for the food supply for the cows, and never seems to find out that frost-bitten grass has but little butter or cheese in it, and little growth, but a large percentage of indigestible fiber and bulk, without nutriment. This system of dairying makes a short season of income, a shorter one of profit, and a long one of care, foddering and no returns. Science has demonstrated that the foods which are the most profitable to give cows for productions are also the best calculated to feed the land. The same satisfactory law is true as regards the foods best adapted to promote growth. Fattening and growth are different conditions and require different foods, as I shall show. The foods for fattening should be more carbonaceous in their character and, as heretofore stated, those for growth and milk production should contain more of the nitrogeneous. There should always be a mixture of these general elements. The proper proportions of nitrogeneous and carbonaceous foods for milk production is as one to five relatively. In order that this subject may be better understood, both in the composition of the animal structure, which must be fed in all its parts, and in the chemical construction of foods, I quote from an

able paper from the pen of Professor H. P. Armsby, of the Wisconsin Experimental Station, which bears on these heads:

1. Water, which makes up from forty to sixty per cent of the weight of live animals, and is just as essential a part of the tissues as any other ingredient.

2. Ash, or mineral matters, amounting to from two to five per cent of the weight and constituting a considerable proportion of the bones and a smaller proportion of the soft tissues.

3. Fat, varying greatly in amount, according to the condition of the animal, but seldom falling below six per cent or rising above thirty per cent.

4. Protein; a name given to an important group of substances, of which washed lean meat or the white of egg may be taken as the type. They all contain about sixteen per cent of the element nitrogen, which is entirely lacking in the three other groups, and are remarkably alike in their general properties. The organic parts of the bones, the ligaments, tendons and muscles which bind together and move the bones, the skin, the internal organs, the brain and nerves, in short, all the working machinery of the body, are composed very largely of protein. Consequently this group of substances is of great importance, and a due supply of it in the food, particularly to growing animals, is indispensable.

The following table shows more in detail the average chemical composition of different animals in different stages of fatness :

AVERAGE COMPOSITION OF LIVE ANIMAL.

	Ox.			CALF.	SHEEP.					SWINE.	
	Well fed.	Half fat.	Fat.	Fat.	Lean.	Well fed.	Half fat.	Fat.	Very fat.	Well fed.	Fat.
Water.....	66.2	59.0	49.5	64.6	67.5	63.2	58.9	50.9	43.3	57.9	43.9
Ash.....	5.9	5.2	4.4	4.8	4.0	3.9	3.8	3.3	3.1	2.9	1.9
Fat.....	8.7	17.5	30.5	14.1	10.2	15.5	21.3	31.9	41.4	24.2	42.3
Protein.....	19.2	18.3	15.6	16.5	18.3	17.4	16.0	13.9	12.2	15.0	11.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In the food of the animal we find the same four groups of substances which we do in the body of the animal, viz : Water, ash,

fat and protein, and, in addition, large quantities of a class of bodies called carbohydrates. Starch, sugar and woody fiber are the commonest representatives of this class. They contain no nitrogen, all are digestible to a greater or less extent, and, with the exception of woody fiber, very readily and completely so.

What purpose, now, do these ingredients of the food serve in the animal economy? To simplify matters we may leave out of account the water and ash. The chief supply of water to the animal is in its drink, and we do not employ fodder for the sake of its water. The ash is essential to the well-being of the animal, but any reasonably sufficient ration will abundantly supply the small amount required by the body. There remains to be considered the protein, fat, and carbohydrates. The protein of its food is used by the animal to supply the wear and tear of its working machinery, which, as above stated, is largely composed of this substance; to supply the material for growth, in the case of young animals, for the production of wool in sheep, and for the caseine of the milk in milking animals. For these purposes it is absolutely indispensable. No other substance can be worked over to any extent into protein by the body. The amount of protein which the ration must contain will vary with the nature of the animal to which it is fed, but a certain minimum amount is always necessary. The fat and carbohydrates of the food serve two purposes in the animal economy. First, they are burned as fuel to keep the animal warm and to supply the force necessary for its internal and external motions. For this purpose a pound of fat is about 2.2 times as valuable as a pound of carbohydrates. Second, the carbohydrates and fat serve as sources of fat. Their relative value in this respect has not been determined, but it is not improbable that it is about the same as for the production of heat. Finally, when more protein is fed than is needed for growth and repair, this also is utilized as fuel or as fat-forming material. For fuel it is worth about 1.1 times as much as the carbohydrates, as a fat-producer less than six-tenths as much. An unnecessary use of protein for fuel or fattening, however, is not usually economical, because it is commonly the most expensive ingredient of the food to produce or buy. In view of these considerations, it is plain that in feeding for different purposes different amounts

and proportions of digestible protein, carbohydrates and fat will be required in the ration. The attempt has been made to formulate, in what are called feeding standards, the requirements of various kinds of animals in this respect, and Wolf's standards, in particular, have been widely circulated in this country, and have been the subject of no little discussion. They are as follows:

FEEDING STANDARDS.

A.— Per day and per 1,000 pounds, live weight.

	Average live weight, per head.	Total organic substance.	NUTRITIVE, DIGESTIBLE SUBSTANCES.			Total nutritive substance.	Nutritive ratio.
			Protein.	Carbohydrates.	Fat.		
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1. Oxen at rest in stall		17.5	0.7	8.0	0.15	8.85	1:12
2. Wool sheep, coarser breeds.....		20.0	1.2	10.3	0.20	11.70	1:9
Wool sheep, finer breeds.....		22.5	1.5	11.4	0.25	13.15	1:8
3. Oxen, moderately worked.....		24.0	1.6	11.3	0.30	13.20	1:7.5
Oxen, heavily worked.....		26.0	2.4	13.2	0.50	16.10	1:6
4. Horses, moderately worked.....		22.5	1.8	11.2	0.60	13.60	1:7.0
Horses, heavily worked.....		25.5	2.8	13.4	0.80	17.00	1:5.5
5. Milch cows		24.0	2.5	12.5	0.40	15.40	1:5.4
6. Fattening oxen, first period.....		27.0	2.5	15.0	0.50	18.00	1:6.5
Fattening oxen, second period.....		26.0	3.0	14.8	0.70	18.50	1:5.5
Fattening oxen, third period.....		25.0	2.7	14.8	0.60	18.10	1:6.0
7. Fattening sheep, first period.....		26.0	3.0	15.2	0.50	18.70	1:5.5
Fattening sheep, second period.....		25.0	3.5	14.4	0.60	18.50	1:4.5
8. Fattening swine, first period.....		36.0	5.0	27.2		32.50	1:5.5
Fattening swine, second period.....		31.0	4.0	24.0		28.00	1:6.0
Fattening swine, third period.....		23.5	2.7	17.5		20.20	1:6.5
AGE, IN MONTHS.							
9. Growing cattle:							
Two to three	150	22.0	4.0	13.8	2.0	19.8	1:4.7
Three to six	300	23.4	3.2	13.5	1.0	17.7	1:5.0
Six to twelve	500	24.0	2.5	13.5	0.6	16.6	1:6.0
Twelve to eighteen	700	24.0	2.0	13.0	0.4	15.4	1:7.0
Eighteen to twenty-four	850	24.0	1.6	12.0	0.3	13.9	1:8.0
10. Growing sheep:							
Five to six.....	56	28.0	3.2	15.6	0.8	19.6	1:5.5
Six to eight.....	67	25.0	2.7	13.3	0.6	16.6	1:5.5
Eight to eleven.....	75	23.0	2.1	11.4	0.5	14.0	1:6.0
Eleven to fifteen	82	22.5	1.7	10.9	0.4	13.0	1:7.0
Fifteen to twenty.....	85	22.0	1.4	10.4	0.3	12.1	1:8.0
11. Growing fat pigs:							
Two to three	50	42.0	7.5	30.0		37.5	1:4.0
Three to five	100	34.0	5.0	25.0		30.0	1:5.0
Five to six.....	125	31.5	4.3	23.7		28.0	1:5.5
Six to eight.....	170	27.0	3.4	20.4		23.8	1:6.0
Eight to twelve.....	250	21.0	2.5	16.2		18.7	1:6.5

B.— Per day and per head.

	Average live weight per head.	Total organic substance.	NUTRITIVE, DIGESTIBLE SUBSTANCES.			Total nutritive substance.	Nutritive ratio.
			Protein.	Carbo-hydrates.	Fat.		
AGE, IN MONTHS.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
Growing cattle:							
Two to three.....	150	3.3	0.6	2.1	0.30	3.00	1:47
Three to six.....	300	7.0	1.0	4.1	0.30	5.40	1:50
Six to twelve.....	500	12.0	1.3	6.8	0.30	8.40	1:60
Twelve to eighteen.....	700	16.8	1.4	9.1	0.28	10.78	1:70
Eighteen to twenty-four.....	850	20.4	1.4	10.3	0.26	11.96	1:80
Growing sheep:							
Five to six.....	56	1.6	0.18	0.87	0.045	1.095	1:55
Six to eight.....	67	1.7	0.17	0.85	0.040	1.060	1:5.5
Eight to eleven.....	75	1.7	0.16	0.85	0.037	1.047	1:6.0
Eleven to fifteen.....	82	1.8	0.14	0.89	0.032	1.062	1:70
Fifteen to twenty.....	85	1.9	0.12	0.88	0.025	1.047	1:8.0
Growing fat swine:							
Two to three.....	50	2.1	0.38	1.50		1.88	1:4.0
Three to five.....	100	3.4	0.50	2.50		3.00	1:5.0
Five to six.....	125	3.9	0.54	2.96		3.50	1:5.5
Six to eight.....	170	4.6	0.58	3.47		4.05	1:6.0
Eight to twelve.....	250	5.2	0.62	4.06		4.67	1:6.5

CHARACTER OF RATIONS.

“Total organic substance” signifies the combustible portion of the ration free from water and ash. The difference between “total organic substance” and “total nutritive substance” shows the amount of indigestible matter in the ration, and thus indicates something as to its proper bulk. The “nutritive ratio” is the ratio of digestible protein to the sum of the digestible carbohydrates and fat. For animals weighing more or less than 1,000 pounds the quantities are to be increased or diminished in proportion to the weight. In using one of these standards we endeavor to fix upon a mixture of feeding stuffs which shall contain, in a reasonable bulk, the amounts of digestible matters called for by the standard. To do this we need to know how much digestible matter the fodders which we are to use contain. The following table shows the average composition and contents of digestible matters of some common fodders. The composition of the fodders is taken chiefly from Dr. E. H. Jenkins’ compilation of American analyses in the report of the Connecticut Agricultural Experiment Station for 1886; the digestibility is computed from the results of German experiments.

AVERAGE COMPOSITION OF FEEDING STUFFS.

	Number of analyses.	PERCENTAGE COMPOSITION.						PER CENT OF DIGESTIBLE MATTER.		
		Water.	Ash.	Protein.	Crude fiber.	Nitrogen-free extract.	Fat.	Protein.	Carbo-hydrates.	Fat.
Pasture grass .....	...	80.0	2.0	8.5	4.0	9.7	0.8	2.5	9.9	0.4
Corn ensilage	53	80.5	1.3	1.5	5.8	10.2	0.7	1.1	11.0	0.5
Clover ensilage	3	76.3	2.5	3.3	6.7	10.2	1.0	2.2	11.0	0.6
Clover hay	25	12.6	6.1	12.6	26.6	39.6	2.5	6.9	37.7	1.3
Timothy hay	40	11.1	4.1	6.0	30.9	45.8	2.1	3.1	43.3	0.9
Hay from mixed meadow grasses	9	15.5	4.7	6.2	31.1	40.4	2.1	3.2	40.2	0.9
Corn fodder—field cured	6	32.1	4.3	4.3	22.1	36.0	1.2	2.5	35.1	0.6
Oat straw	4	9.3	5.2	3.5	43.4	36.1	2.2	1.4	42.6	0.7
Rye straw	2	11.1	5.4	4.5	38.8	38.4	1.8	1.0	37.5	0.6
Wheat straw	1	6.5	7.0	5.0	38.1	42.0	1.5	0.9	37.7	0.5
Mangolds	5	91.8	1.0	1.5	0.9	4.7	0.2	1.1	4.5	.....
Rutabagas	1	87.1	1.4	1.2	1.2	9.1	0.1	0.7	8.1	.....
Turnips	1	88.9	0.7	1.3	0.9	8.1	0.1	0.8	7.2	.....
Potatoes	6	78.5	0.9	2.1	0.5	17.9	0.1	1.4	16.6	.....
Peas .....	.....	13.2	2.4	22.4	6.4	52.6	3.0	19.7	55.0	1.5
Barley	9	10.9	2.4	12.4	2.6	69.9	1.9	9.7	62.0	1.7
Oats	25	10.9	3.0	11.4	9.9	60.1	4.8	9.8	48.0	3.9
Rye	6	11.6	1.9	10.6	1.6	72.6	1.7	8.5	58.4	1.5
Wheat	310	10.5	1.9	11.8	1.8	71.9	2.1	9.5	60.9	1.9
Corn (Maize)	190	10.5	1.6	10.6	2.1	69.8	5.5	8.4	64.8	4.7
Sorghum seed	9	12.5	1.8	8.9	1.9	71.3	3.7	7.6	68.5	2.8
Malt sprouts	3	10.3	5.7	23.0	10.7	48.6	1.8	18.8	48.1	0.9
Brewers' grains	15	75.0	1.0	5.6	3.9	12.9	1.7	4.1	9.6	1.4
Cottonseed meal	24	8.3	7.3	42.1	5.7	23.4	13.2	35.8	22.3	11.7
Oil meal—old process	9	9.2	5.9	31.5	9.3	36.3	7.8	27.1	33.1	7.0
Oil meal—new process	12	10.7	5.6	32.9	9.5	38.3	3.1	28.3	34.8	2.8
Rye bran	5	11.5	3.7	15.4	3.6	63.4	2.5	10.2	47.7	1.5
Wheat bran from roller mills	7	12.0	5.6	16.1	8.4	53.7	4.2	12.6	44.1	2.9
Wheat bran—old process	9	12.0	4.9	13.0	6.1	58.2	3.8	10.2	47.5	2.6
Wheat shorts	8	12.7	4.3	13.8	7.5	57.6	4.1	10.8	46.8	2.8
Gluten meal	8	9.1	0.8	29.9	1.5	52.6	6.1	23.6	48.8	5.2

As an illustration of the manner in which these tables of feeding standards and of the composition of feeding stuffs are intended to be used, we may compute a ration for a milch cow weighing 1,000 pounds.

As the foundation for a ration, let us take twenty pounds of corn ensilage and ten pounds of clover hay. The first step is to estimate how much digestible matter these will furnish. According to our table, average ensilage contains 80.5 per cent of water and 1.3 per cent of ash, and, consequently, $100 - 80.5 - 1.3 = 18.2$ per cent of dry organic matter, together with 1.1 per cent of digestible protein, 11.0 per cent of digestible carbohydrates, and 0.5 per cent of digestible fat. Twenty pounds of it would therefore contain 3.61 pounds of total organic matter, 0.22 pounds of digestible protein, 2.22 pounds of digestible carbohydrates, 0.10 pounds of digestible fat. In the same way we estimate the amount of

organic matter and of digestible substances contained in ten pounds of clover hay, and we find that the coarse fodder of the proposed ration furnishes the following amounts of nutritive matters :

	Organic matter.	DIGESTIBLE.		
		Protein.	Carbohy- drates.	Fat.
Twenty pounds of ensilage.....	Lbs. 3.61	Lbs. 0.22	Lbs. 2.22	Lbs. 0.10
Ten pounds of clover hay	8.00	0.63	3.80	0.10
Total	11.61	0.85	6.02	0.20

This naturally falls considerably short of the standard, and the deficiency must be made up with grain or meal of some sort. The market price will usually be an important factor in deciding what kind shall be used. We will suppose, however, that a mixture of corn meal and bran has been fixed upon. What amounts of each shall be taken to complete the ration? This we must find by trial. We start with, say, five pounds of each, and calculate from the table how much digestible matter they will supply. Having done this, our table stands as follows :

	Organic matter.	DIGESTIBLE.		
		Protein.	Carbohy- drates.	Fat.
Twenty pounds of ensilage	Lbs. 3.61	Lbs. 0.22	Lbs. 2.22	Lbs. 0.10
Ten pounds of clover hay.....	8.00	0.63	3.80	0.10
Five pounds of corn meal.....	4.40	0.46	3.35	0.21
Five pounds of bran.....	4.09	0.61	2.21	0.16
Total.....	20.10	1.92	11.55	0.57

The ration still falls short of the standard. Before increasing the quantity of bran or meal, however, let us see exactly what is lacking. We need still 0.58 pounds of protein and 0.92 pounds of carbohydrates, while the fat is already in excess. It is plain that

neither corn meal nor bran will answer to complete the ration, because if enough of either be added to increase the protein to the required amount, the amount of carbohydrates will be raised far too high. What we want is some feeding stuff containing plenty of protein, and but little carbohydrates and fat. One such fodder is new-process oil meal. We add two pounds of that to the ration, and it then stands thus:

	Organic matter.	DIGESTIBLE.		
		Protein.	Carbohy- drates.	Fat.
Ration as above	20.10	1.92	11.58	0.57
Two pounds oil meal	1.88	0.54	0.56	0.07
Total	21.98	2.46	12.14	0.64
Standard	24.00	2.50	12.50	0.40

By the addition of the oil meal the ration is made to correspond as closely as is necessary with the standard. While it contains somewhat less carbohydrates than the standard, it contains enough fat to make up the difference. It is quite possible that the actual ration when weighed out would not approach as near to the standard as it does on paper, for it must not be forgotten that we are working with averages, both as to composition and digestibility. Any particular fodder is liable to differ more or less from these averages, and, therefore, all calculations of rations can be approximate only.

It is true that farmers do not understand the elements contained in foods as well as they ought to, and these tables have been inserted with the explanations to enable them to better understand the whole subject, and to be able to compound or mix foods so that they can be more economically used and result in more profit in growth and production. It must be remembered that with a stint of food of a needful kind there will be a falling away in the condition of the animal or in its production, and where an excess of any kind of food is furnished beyond the wants of the animal all that excess is lost. This is illustrated in this

way, and it is altogether too common on farms where any animal is fed more corn meal than it can digest and assimilate, the excess is voided and lost. The digestive capacity of all animals is limited, and it is also true that all animals, although of a kind, vary in their powers of digestion. That great saving can be made in food for animals is apparent to me, and also the associate proposition that more profit can be had with more knowledge of the subject and with more careful application of scientific facts. The field for improvement embraces our whole State.

SUMMER FOODS.

With almost every dairyman there is a scarcity of summer foods. There should be a radical change. In order to encourage a new departure in the growing of summer foods, I will mention some crops which may be cheaply grown, and which are specially fitted to promote maintenance and production. Beginning in the spring, it is best to get the cows out to grass as soon as there is a bite, in order that the coarser grasses may be eaten off while tender. By so doing they will promptly renew their growth, and furnish another bite. This growth will in this way be kept up all through the season, and the wet lands with the coarse grasses will really afford the most pasture. This is not usually the case, and thousands of acres annually grow up to bogs or coarse grass, which stock will not eat. Here is a great loss. Every dairyman should have a field of oats and peas. One-third peas and two-thirds oats sown where they will be handy to cut and feed to the cows in the stable, as soon as the oats begin to head out. The balance not fed green may be cut and cured like hay, and be put into the barn and fed. This is a special butter and cheese food with the grain in it. A field of early clover can be made to furnish extra food before this time. Both the clover and the oats and peas are well-balanced foods, and a liberal feeding of them at night will increase the milk yield, and produce a corresponding increase of cheese or butter. The next soiling crop in order should be fodder corn of some early maturing variety; to be followed with later sorts, until the cold weather of autumn shall have cut off all succulent foods from the fields. Fodder corn, cut and bound up and set in stooks, can now take the place of the green foods, and this food will tend to keep

the flow of milk up to a paying basis. These extra green foods, fed at night in the stable, will always pay. The cows may obtain in the day and night pasture enough food for maintenance, and a little over for production, but, with this extra food, there will be an increase of provender for making milk — all for milk — with a corresponding ratio of profit. There must be just this business sense and outlay in the dairy, if we expect to make it a profitable business. There is no branch of farming where the returns are so sure and come to us so promptly as in the liberal feeding of cows. We can get our pay the very next day.

FODDER CORN.

Fodder corn must be, and will be, the future basis, with grass, of dairy success in our State. While this proposition is true it is equally true that not one farmer in one hundred grows the crop in a proper way. The common method is, to sow corn broadcast at the rate of about four bushels to the acre. In this way a lot of soft undeveloped and washy stems are produced, which are mostly all water and woody fiber. They contain only a trace of sugar and are almost worthless for food. Any farmer can determine this fact by simply tasting of these stems — they are not stalks — and by comparing their sweetness with those of the corn, which has been grown in a manner to develop a fully matured stalk with ears on it. It does not pay to grow fodder corn, unless there are perfect stalks and at least incipient ears. This can be done by sowing it in drill-rows, two and a half to three and a half feet apart, according to the size of the corn; and never putting more than ten quarts of seed to an acre. The corn must have the sunlight to develop the sugar. Grass or corn fodder grown in the shade does not have the sweetness or food elements as when grown in the sun. This is nature's law and we must regard it.

SILAGE.

The best fodder corn for silage should not be sown thicker than eight quarts to the acre. The best agriculturists of the State now practice the methods of the least seed. No crop can be grown so cheaply which embraces so much good. Fodder corn is indispensable to good dairying, and the area should be largely

increased. My experience leads me to recommend the B. & W., or the Southern sheep-tooth corn as the best for late summer feeding and for silage. It grows rapidly and to a large size with an abundance of leaves. It should be put in as early as possible. Where this corn will not reach maturity the larger varieties of native corn are recommended as the best, as maturity or a nearly ripening condition is best. Green and watery corn will make very sour silage. The building of silos and the feeding of silage is on the increase. This has been brought about by the teachings of a few successful agriculturists who have been able to preserve corn fodder and other green forage plants in silos constructed perfectly air tight. As silos were formerly made, and as the contents were grown and handled, there was an excess of fermentation, which made the silage objectionable, if not injurious to the animals. I can not approve of the feeding of silage to cows whose product is used in the dairy when the silage has been allowed to ferment to any considerable degree and much less to that of a vinegar acidity. I have spoken, under the head of whey ferment, of the danger and positive effects of such foods. If corn fodder is grown in such a manner that it reaches maturity, or nearly so, it will not ferment to the extent that it will where there is an excess of water in proportion to the sugar. Those who are enabled to preserve the silage in a comparatively sweet state plant the corn so thinly that the stalks are perfectly developed and ears are formed on them, and when the corn has reached the period of growth that the kernels begin to glaze, or harden, they cut it up. It is put into the silo with no moisture upon it, that is, free from wet. When this course is pursued the fermentation does not rise so high as to go beyond incipient acidity and it is held in this state by the exclusion of the air and the formation of carbonic acid gas which preserves the silage. The whole mass, after standing two or three days, is covered up air tight and is preserved comparatively sweet, with the exception of a small portion of the top which is more or less decayed. This part should be thrown away, as it is unfit for food. I submit that where corn is so grown, and the packing in the silo skillfully done, that the germs of ferment are destroyed or held in check, before acidity is developed and any form of

putrefaction has begun, that the silage is good food and is to be commended. This is a convenient form in which to preserve corn fodder and, so far as I am aware, no injurious results have been observed. The truth is, no one has yet been able to give the status of silage in its transformation in the silo, and authorities differ in their ideas in regard to the chemical changes it undergoes. Some claim that the heat runs from 125 to 130 degrees and this temperature cooks the silage and so preserves it; but there is doubt of this. The real secret of preserving green food, in the silo, is to always have it matured and as free as possible from water, and then put it into an air-tight silo. The heat which arises will drive off the excess of moisture and it will then preserve itself by its own dryness and the presence of the carbonic acid gas which has taken the place of the air and moisture, which have been driven off. I have had an analysis made of the milk, butter and buttermilk, which was produced from sweet silage as a considerable part of the rations of the cows, and no taint or injurious effects could be detected. It is possible then, to make the silo an important factor in furnishing cheap foods in a succulent form to cows. This fact will prepare the way for a system of winter dairying which could be inaugurated in this State with profit, as the market is constantly growing in its demand for butter freshly made. More butter can be made from the feeding of sweet silage than from the feeding of corn stalks, cured. This last process is so difficult to accomplish without mold and rot, that it is practically almost an impossibility. To leave them in stooks in the field is attended with loss and impossibilities in cartage in winter, which have discouraged many from any attempt to preserve fodder corn in this way. There has only been partial success in the silage system, but enough has been done to give much encouragement of future results, which will tend to the support and maintenance of our great dairy industry in summer as well as in winter. The farmers now need general and specific information on this very subject — the silo and silage. There is also an immediate demand for scientific experiments and demonstration in regard to the silo and its contents.

Succulent foods seem to be a necessity to successful dairying. They promote secretion and preserve the healthfulness of the animals. Further than these results they aid in promoting the digestion of other foods; and it is found that better results can be had from grain and hay, coupled with the feeding of roots or silage, than with more grain and hay and none of these additional foods. The matter of special foods to increase the production of milk is very important. That an average per cow of 3,034 pounds of milk per factory season, as shown by the great number of inspections made, as given in this report, must be largely due to a lack of food supply adapted to the purpose is demonstrated by the facts as well as by my own observation. It is the same in those sections from which for lack of time no reports have been obtained. The grain foods which will make the best milk for cheese and butter will also make the most manure. They contain, by analysis, enough nitrogen, phosphoric acid and potash as these elements cost in the markets to make them valuable as manures, and to give them each a specific manurial value. Among these are wheat bran, worth, per ton, for manure, thirteen dollars and four cents; cotton seed meal, twenty-eight dollars; linseed meal, new process, twenty-one dollars and eighty-five cents; old process, twenty dollars and fifty-four cents; rye bran, nine dollars and eighty-three cents; pea meal, sixteen dollars and thirty-eight cents; corn meal, six dollars and ninety-four cents; oats, seven dollars and sixty-one cents; barley, seven dollars and seventy-six cents; rye, seven dollars and sixty-one cents. The cost then of these foods is largely compensated for in their manurial value. Especially is this the case with some of them which are also of the most value in the food ration to produce rich milk. I shall give tables of rations made up by the best authorities, and which I know will produce compensating results for milk, growth and manure.

RATIONS FOR FEEDING.

The tables which follow are made up by some of the best German and American authorities, as stated under each head. They are copied from "Hints on Dairying," by F. D. Curtis. The rations are much stronger than most farmers would feed and are

understood to be the entire food for twenty-four hours. They are so combined that they embrace nearly all the different kinds of fodder. By a careful study of these formulas the farmer can see the nature of the foods and how they are arranged to make a well-balanced ration, that is, meals of food, to feed every part of the body and to put the whole physical structure in a vigorous working order, with a surplus, or excess, beyond the immediate or the restorative wants of the body to make production, or, in other words, to fill the milk vessels with rich milk. The fattening rations are formulated for making the basis for maintenance with a surplus for fat. When cows are fed grass all they can eat, or other green fodder, they will do well on half of the grain ration mentioned and, in truth, they do not require more than half of the amounts named. Take No. 1, of the second lot, as an example and in place of the clover hay and straw put grass and the ration is a strong one and well balanced with half of the grain, and it is a good one with either the linseed or the cottonseed cake, or meal (which is the cake ground) left out. The wheat bran or other bran must be left in. No. 3, of the second lot, is one to be considered by the most of farmers. This ration is rich in its manurial elements and the man who give it to his cows is making rich and productive pastures for those who come after him. It is the testimony of one prominent dairyman in this State, that the productive capacity of his farm has been doubled in ten years by this system of feeding.

Dr. Wolf gives an illustration of the standard for a milch cow, by saying that thirty pounds of young clover hay will keep a cow in good milk, and that this contains of dry organic substance twenty-three pounds, of which is digestible, albuminoids, 3.21; carbohydrates, 11.28, and fat, 0.63. This is .71 pounds albuminoids more and .22 pounds of carbohydrates less, with .13 pounds of fat more than the standard. Then he takes the richest and best meadow hay, of which thirty pounds contains of organic substances, 23.2 pounds; having digestible albuminoids, 2.49 pounds; carbohydrates, 12.75 pounds, and fat, .42 pounds. This is almost exactly the feeding standard. As will have been seen by what has preceded, the German standard ration for a milch cow is twenty-four pounds of dry organic substance, containing 2.50 pounds of

nitrogenous food and 12.90 pounds of carbonaceous food. To secure this Dr. Wolf recommends for every 1,000 pounds of live-weight: Twelve pounds average meadow hay; six pounds oat straw; twenty pounds mangolds; twenty-five pounds brewers' grains; two pounds cottonseed cake or meal.

Professor S. W. Johnson's ration for the same purpose is: Twenty pounds corn fodder; five pounds rye straw; six pounds malt sprouts; two pounds cottonseed meal.

The following milk rations are recommended by Professor E. W. Stewart, of New York:

No. 1.—Eighteen pounds oat straw; five pounds bean straw; six pounds cottonseed cake.

No. 2.—Twenty pounds barley straw; five pounds pea straw; two pounds wheat bran; five pounds linseed meal.

No. 3.—Twenty pounds poor hay; five pounds corn meal; five pounds cottonseed cake.

No. 4.—Twenty pounds wheat straw; five pounds wheat bran; three pounds corn meal; four pounds linseed meal.

No. 5.—Twenty pounds fresh marsh hay; five pounds corn meal; five pounds cottonseed meal.

No. 6.—Ten pounds good meadow hay; ten pounds rye straw; three pounds wheat bran; five pounds linseed meal.

The following are given by the same author as milk rations:

No. 1.—Ten pounds clover hay; ten pounds straw; four pounds linseed oil cake; four pounds wheat bran; two pounds cottonseed cake; four pounds corn meal.

No. 2.—Sixteen pounds meadow hay; eight pounds wheat bran; two pounds linseed meal; six pounds corn meal.

No. 3.—Eighteen pounds corn fodder; eight pounds wheat bran; four pounds cottonseed meal; four pounds corn meal.

No. 4.—Fifteen pounds straw; five pounds hay; four pounds cottonseed meal; four pounds bran; four pounds corn meal; three pounds malt sprouts.

No. 5.—Ten pounds corn fodder; ten pounds oat straw; two pounds linseed meal; four pounds malt sprouts; ten pounds oat and corn meal.

No. 6.—Sixty pounds ensilage; five pounds hay; two pounds linseed meal; four pounds bran.

FATTENING RATIONS.

The following rations are recommended by Professor E. W. Stewart for fattening cattle. The rations are for 1,000 pounds of live weight:

No. 1.—Eighteen pounds winter wheat straw; forty pounds corn sugar meal; four pounds cottonseed meal.

No. 2.—Twelve pounds oat straw; ten pounds wheat bran; forty pounds corn sugar meal.

No. 3.—Twelve pounds clover hay; six pounds oat straw; forty pounds corn sugar meal; two pounds linseed meal.

No. 4.—Fifteen pounds corn fodder; five pounds malt sprouts; three pounds corn meal; forty pounds corn sugar meal.

No. 5.—Twenty pounds best clover hay; fifty pounds corn sugar meal.

No. 6.—Twenty pounds wheat straw; eight pounds timothy hay; six pounds cottonseed cake.

No. 7.—Twenty pounds corn fodder; six pounds Indian corn; six pounds linseed cake.

WORKING RATIONS.

The following are rations for oxen at hard work as given by Professor Stewart:

No. 1.—Twenty pounds best meadow hay; ten pounds corn meal.

No. 2.—Twenty pounds corn fodder; five pounds clover hay; two pounds wheat bran; three pounds cottonseed cake or meal.

No. 3.—Seventeen pounds clover hay; three pounds wheat bran; ten pounds corn meal.

No. 4.—Twenty-five pounds oat straw; five pounds wheat bran; four pounds linseed cake.

DIGESTIBILITY OF FOODS.

The following table copied from Professor Stewart gives the digestibility of a few of the more common foods :

	In one hundred pounds.	Digestible.	Digestible in two thousand pounds.
<i>Average meadow hay :</i>			
Albuminoids.....	9.7	5.4	108
Carbohydrates.....	41.6 }	41.0	820
Crude fiber.....	21.9 }		
Fat.....	2.5	1.0	20
			948
<i>Corn fodder :</i>			
Albuminoids.....	4.4	3.2	66
Carbohydrates.....	37.9 }	43.4	868
Crude fiber.....	25.0 }		
Fat.....	1.8	1.0	20
			954
<i>Oat straw :</i>			
Albuminoids.....	4.0	1.4	28
Carbohydrates.....	36.2 }	40.1	802
Crude fiber.....	30.5 }		
Fat.....	2.0	.7	14
			844
<i>Linseed oil cake :</i>			
Albuminoids.....	28.8	23.77	475
Carbohydrates.....	32.3 }	35.15	703
Fiber.....	10.0 }		
Fat.....	10.0	9.0	180
			1,358
<i>Wheat bran :</i>			
Albuminoids.....	15.0	12.9	252
Carbohydrates.....	52.2 }	42.6	852
Fiber.....	10.1 }		
Fat.....	3.2	2.6	52
			1,156
<i>Corn meal :</i>			
Albuminoids.....	10.0	8.4	168
Carbohydrates.....	62.1 }	60.6	1,216
Crude fiber.....	6.5 }		
Fat.....	6.5	4.8	96
			1,476
<i>Oats :</i>			
Albuminoids.....	12.0	9.0	180
Carbohydrates.....	55.0 }	43.0	860
Crude fiber.....	9.3 }		
Fat.....	6.5	4.7	94
			1,134

These foods when fed have two values, the first to support life which uses up the carbon or carbohydrates, that is, burns them up and also extracts from the food nutriment for support or maintenance, and in addition nutriment for production. It has been found

that cows in milk and growing animals extract or take out of their food about twenty per cent. of the nitrogen and phosphates contained in them for the above purposes. The balance, eighty per cent, goes into the bowels and is the waste product or manure. It is plain then to see the advantages of rich foods, as we get pay in the food, the nutriment, and in the manure. It must be a poor dairyman who can not from both of these factors get enough return to pay for food for his animals. Such manures are the best and far more lasting than the purchased commercial fertilizers, and they will make returns in future crops for years. It is no mistake ever to feed bran, linseed meal or a small amount of cottonseed meal with corn fodder or silage. These foods make up the lack of the corn fodder in albuminoids to make a complete food. Some corn meal, on the other hand, should be given in winter with clover hay, and is a more suitable food for animals in winter than in summer, as it is so full of carbon it tends to produce a feverish condition. In winter more carbon is required to keep up the heat. It is the fuel burned in the body to supply animal heat. As a rule then the corn should be saved until winter. Let it be remembered that linseed meal and cottonseed meal will make more butter than corn meal; but it will be softer and more oily if fed to excess. Corn meal makes less butter, but it is firmer and will keep better. To get milk of the best quality there must be a large amount of nitrogen fed to the cows. This constituent is an absolute necessity, hence the value of all kinds of bran for dairy cows, shorts, oats, peas and linseed and cottonseed meal. The new process linseed meal, is the best for the dairy; because there is more protein or muscle producing food in it than in the old, in proportion to its weight; as the old process contains more oil, or fat-forming material.

The importance of extra food is manifest from the fact that the past season cows fell off in midsummer nearly half of their milk yield. If extra food had been provided this great loss need not have taken place. When cows dry up in summer, for lack of food or for any other cause, they do not come back to a full secretion of milk and a continuous loss is sustained. It will pay in an increase of milk for the present, and in a prospective gain also, to furnish cows with a grain ration rather than to allow them to

shrink in milk production. In fact, this should never be allowed. There can be no motive power in an engine without fire; so there can be no production in a cow without food and the ratio holds good all the time.

IMPROVING PASTURES.

Extra grain rations will pay in the extra amount of manure the cows will make and this will be taken by them to the pastures which are running down, as I have shown, for the lack of it. It may be a new idea to the average agriculturist to feed his cows in summer purchased food, if he does not grow enough, in order to feed in turn his depleted pastures, but is nevertheless a sound idea and one that is liberally put in operation by some of the best farmers in the State. The purchase need not be made solely for this purpose, as a dividend may be had daily in the milk pail. This system of farming has been so far demonstrated that the number of cows have been increased very largely and at the same time more hay and grain have been grown upon the same farms. I do not urge the purchase of all these extra foods, for a system may be inaugurated of growing many of them on the farm, especially these green foods I have enumerated. The future dairyman will fail unless he does. The margin is too small for half returns, while it must be patent to all that the labor and investment will remain the same.

AVERAGE INCOME PER COW — THE PHYSICAL CONDITIONS WHICH RELATE TO PRODUCTION — COLD, FOOD AND WATER.

There are three general physical elements which have largely to do with the annual income of cows. It is a fair average to put this at about thirty-five dollars per cow. In many dairies it is not over thirty dollars, while in others it is above the general estimate of thirty-five dollars per cow. This affords an exceedingly small profit. In fact there is none at all if the services of the dairyman and his family are estimated at half the average cost for labor. This low and non-paying income is mostly due to causes pointed out in this report under the various heads discussed. This matter is of so much importance that I think it my

duty to invite special attention to a few prominent reasons why it is so. The system of wintering cattle in this State is not only unduly costly, but in many cases cruel. It has been demonstrated that cows will yield more milk and of a better quality when kept warm. This fact is self-evident with a moment's reflection, as the nutritive elements of their food are not consumed in efforts to counteract the cold. Nervous forces are also saved. More than this, in winter cattle require but little exercise, and the common sentiment which leads to turning them into wind-swept yards to exercise, where they in reality suffer with the cold and add one-half to the cost of wintering, is a sentiment without sense and lacking in judgment. It is too costly to be indulged in. I am entirely satisfied that one-third of all the fodder stored on the dairy farms in New York is thus foolishly wasted in the efforts to keep out cold; or, to put it in other words, to keep cattle alive through the winter. It is a system which adds not less than ten dollars to the yearly cost of keeping cows. I am astonished at the want of enterprise and care of farmers in regard to their stables. They are quite generally cold and allow the manure to freeze in them, which is a condition of things which draws severely on the vitality of the stock imprisoned in them. A small outlay for building-paper and boards would keep out a great amount of cold. The outside walls should be made tight to the extent of banking, if necessary, and, in short, every effort made to promote comfort and reduce cost of keep. There is also a waste of food by foddering in barn-yards. No man can afford to do this. The want of knowledge in mixing foods is another great drawback. Feeding all cornstalks, at one time, or all straw, or even all hay, is not economy and helps to swell the items of cost and leads to depletion in body and lessening in production, which makes smaller income. With these fodder foods there should always be at least a small ration of foods containing more nitrogen or protein to fill the demands of the whole organism. Cows giving milk can not consume enough straw or dry fodder corn to obtain a surplus of nutriment to make a paying quantity or quality of milk. The thing is impossible. It is estimated, and indeed it has been shown, that an acre of good fodder corn, 12,250 pounds per acre, which is a possible yield, and often much more,

fed with fifteen dollars worth of nitrogeneous foods, will make 500 pounds of butter. This result involves the keeping of the cows from exposure to the cold and good care otherwise.

DRINKING ICE-WATER.

The plan, or rather the want of plan, practiced on too many farms, of compelling cows to go to a creek in winter for water, is all wrong. Cows thus compelled to get their water will never pay any profit. Here is another item of extravagance in the unnecessary consumption of food in order to live, and also a waste of energy and vital force which ought to be turned into the channels of milk production. This short-sighted and expensive way of managing cows will explain another reason why the average income is only about thirty-five dollars. It must be remembered that cows, when giving milk, require about twice as much water as they do when dry, and that, when sent to a creek to drink out of an ice hole, they often do not drink at all. If there is a large herd, many of them get chilled while waiting their turn and go back without water. The next day they drink to excess and are chilled to a dangerous degree.

WARMING WATER.

It is somewhat novel idea now being quite generally discussed to warm artificially the water given to cows in winter. There is, no doubt, but that a large gain may be had in the amount of food consumed, when the water is warmed up to the summer heat, as compared to the too common custom of compelling cattle to go long distances to get their drink out of frozen creeks, or out of troughs with the water in a frozen condition. These economic and humanitarian questions in the case of stock need to be agitated and discussed until radical reforms are inaugurated and practiced. It certainly would be poor policy to warm the water and then turn the cows out into a freezing temperature to stand around humped up with the cold for hours. The system of warmth should be general; warm stables, warm water and no exposure.

Professor Samuel Johnson, of the Michigan Agricultural College, made last winter a very careful experiment in giving

cows warm water. It continued for eight weeks. The experiment was with one cow and was made thorough and practical. The cow was given every alternate week cold water, and then warm water at a temperature of sixty degrees. During this period the cow drank 535 pounds more of the warm water than of the cold. The professor says, in his report, "The results are not as prominent in favor of warm water as was expected. The difference is so slight as scarcely to pay for warming the water. During the entire period, when the warm water was given, there was forty-five and a half pounds more of milk given than during the period when cold water was given. A little more butter was made during the warm water period than during the cold. There was, however, less food consumed." No doubt this cow was kept warm all of the time. If she had been exposed to the cold and then given ice-cold water there would have been a more marked difference in results. Cold water must be warmed in the cows stomach, which takes extra food.

The experiment is not so pronounced as that of Professor I. P. Roberts, of Cornell Experimental Station. In this case the water was warmed to a much higher degree. The water was warmed to 80° Fahrenheit. There were three cows in each set. Those given warm water drank per day, per cow, 120 pounds. Those given cold water drank per day, per cow, 110 pounds. At the same time there was a saving of fourteen per cent in feed in favor of the cows having the warm water. The flow of milk was not appreciably affected. The quality of the milk was not tested. To fill a chilled cow with water also chilled is certainly not a rational way to maintain vital force or to economize food. This practice is too common among dairymen. Improvement may be made by covering wells to keep the cold out, and by pumping up the water as it is wanted from a warmer temperature than that of the open air. Many farmers now warm the water in tanks, by various devices, using lamps or small stoves with which to produce heat.

EXERCISE.

There is a misapprehension, in my judgment, in regard to the importance of exercise for cows in winter. A few minutes' stirring about pleasant days is all that is required, and certainly never a

long-time exposure to the cold. One of the most successful breeders and dairymen in the State does not turn his cows out of the stable from November till May. Another successful breeder does not turn out his calves until they are a year old. I must insist that the low income gets a down-hill start right here. In some other experiments made in heating the water it was found that the difference in product was slight. It is clear to my mind, and I so advise, not to oblige cows to drink ice-cold water on the one hand, nor within fifteen or twenty degrees of it; and on the other hand, if the water is naturally from fifty to fifty-five degrees temperature, it will not pay to warm it. We should not adopt new ideas simply because they are new, nor hang on to old ones simply because they are old. A rational view is best. It must be more natural for cattle to drink colder water in winter than in summer, and it will not injure them. It is the extremes which are irrational and which do harm. When dry foods are given cows require more water daily and to get supply oftener. I do not recommend in winter watering and feeding but twice in twenty-four hours. The watering should precede the feeding. There should be regularity in this work, and between times the cows should not be disturbed in order that the processes of digestion and assimilation may go on undisturbed. The cow will soon adopt a quiet and docile habit, which will tend to facilitate digestion and the secretion of milk. A nervous, excited, and irritated condition is exhaustive of vitality and nervous force and should always be avoided. Keeping cows in the stable tends to quiet and saves all this.

When succulent foods are given to cattle they will not endure exposure as well as when their food is all dry. This is because succulent food causes the pores to be more open and stimulates secretion, and the animal is always more susceptible to taking cold. The stable is the safest place.

It will be seen that this is a line of progressive farming which should be encouraged, and it is so substantial in its results that all efforts to furnish farmers with the requisite knowledge to attain them is worthy of support.

FEEDING WHEY — ITS EFFECTS ON THE COWS —
MILK AND CHEESE.

It is not a general practice to feed whey to cows, but it is sometimes done. The best cheese-makers do not favor the system. If the whey could at all times be fed to the cows in a sweet state, the injurious effects would not be so marked. This is, however, an impossibility without a radical change in cheese-making and in the manner in which the whey is handled. It must be plain to all cheese-makers, who want a superior article, sweet flavored and free from all taints in taste or odor, which would lessen its value, that sour whey, on the rapid road to putrefaction, is not a suitable food, although it may possibly increase the flow of the milk. In my judgment cows should not have, for any purpose of milk production, either to sell as milk or to manufacture into cheese or butter, any foods or food in which the work of decay has begun. As has been stated elsewhere, when such foods are consumed, the milk produced does not possess good keeping qualities.

It is interesting, and we quote from a number of the separate reports of cheese factories to show the possible damage and the general unwisdom of feeding whey to cows. A large number say "it spoils the flavor of the milk," others add the natural sequence, "it spoils the flavor of the cheese;" "it makes the milk gassy;" "it increases the flow, but injures the quality;" "it takes more milk for a pound of cheese;" "it will never make a fine cheese;" "it affects the scalding properties of the milk, the average and flavor of the cheese." Now and then a man says it would not injure the cheese if the whey was properly cared for at the factory. As it is not, and is universally run into a tub or vat reeking with fermentation and rot, and must be exposed still further to deleterious influences before it is converted into nutriment, it is safest and best to leave it for feeding to the swine, for which it is an excellent food when toned up and made complete by the admixture of middlings, peas, oats or other foods rich in nitrogen. A small proportion of corn should be added, to make up for the loss of fats. Whey is about ninety-three per cent water, and with the butter fats and caseine taken out in the curd, and an active fermentation going on, which has fed on and consumed the little

remaining butter-fat, sugar and caseine which may have been left in the whey after the curd has been separated, the real food elements are so little that but a small percentage of milk solids can be supplied from fermented whey. Fermentation will undoubtedly destroy one per cent of food elements, leaving a volume of water of the original ninety-three per cent to be worked over by the animal to get only about, and perhaps less than, six per cent of food constituents. This is assuming that the cheese is carefully made.

Feeding whey to cows is in my mind a senseless attempt at economy. The taking into the stomach of such a volume of fermented stuff must of necessity interfere with its natural functions, and retard digestion and change the condition of the food. One intelligent cheese-maker was of the opinion that "feeding whey made the cheese bitter. In cool weather the effect was not so unfavorable." "When grain is fed the effects are not so apparent." Grain is a good adjunct. It supplies the lack of food in whey, and with it as a ration the cow could not drink so much whey. Some dairymen assume that because a cow will drink whey, and assume to relish it, that it must be good for them. This does not follow as a physical law any more than that the human family eat and drink nothing except for their good. A factory man facetiously remarks that "whey makes the milk thin." Another says "sour." A large number indorse these statements and apply them to the cheese also. That feeding whey to any extent affects the flavor and deteriorates the quality of the cheese there is no possible doubt. The testimony is too universal and emphatic. The further damaging effects are that "it makes the cheese work too quickly and it makes it soggy." Again it is stated that "it hurts the quality of butter and cheese in every way." Another says in pointed language "The milk smells of it and so does the cheese."

There is a lesson in all this which has great signification. The makers of cheese in this great State want more consumers. What folly, then, to deliberately load this article of food, which is seeking friends, with such repulsive features that everybody wants to shun it, and if they have once tested its claims, are made more adverse to it.

Dairymen can see in this feeding of whey no exception to the general law, that taints in foods may be transmitted through the animal's system into the secretions. There must be a closer study into these conditions, and a more careful observance of nature's laws, if we would lift our dairy products up to a high standard, which it is possible for us to do, and where they will lead the market. Any dairyman does himself an injury when he deliberately gives to his cows any food which is calculated to impair the quality of the milk or the butter or cheese produced from it. He also lowers the standard of his products in the market, and lessens their value.

Bad as this condition is in individual cases, it is not so injurious in its effects as it is in the case of the man who is a patron of a coöperative factory in which all must lose by the damaging acts of one.

Whey may be turned to good account in feeding swine, quite well-grown, provided it is carried far away from the factory, and there is mixed with the whey a portion of grain. There is not enough muscle or bone food in clear whey to make it a healthy or profitable food for young pigs or calves. When given to either, it should only be considered as supplying the needed liquid with some fat-forming material. A gallon of sweet whey, to which a gill of linseed oil meal has been added, will make a living and growing ration for a calf when three weeks old, but it is better for one older, which has been fed up to this time on milk. To reduce the feeding of whey to the closest possible degree of economy, it should be heated to a boiling point with the oil meal stirred in. An addition of a small handful of wheat middlings or oat meal will also give more and better food value to the ration. This should be done as the calf grows older. The same mixture is right for young pigs or growing shoats. When the frame is already grown, the addition of corn meal will improve the food. Cooking the whey and the oil meal make both more digestible, and will tend to prevent souring. I agree with some of the best feeders, that foods in an advanced state of fermentation are not natural for animals and are deleterious to their health. If the acidity could be kept within the first degree it would not be so objectionable; but this is almost an impossibility. Cooking the whey

destroys the germs of ferment at work in the food, and this is a healthful advantage. It is a gratifying fact that whereas the feeding of sour whey to milch cows was once quite common, it is now the exception rather than a rule. Perfect cheese can only be made by a strict observance of sanitary laws, which will be treated in a separate paper in this report by the chemist of this department, Dr. R. D. Clark.

TAINTED MILK—ITS EFFECT ON CHEESE—CAUSES AND REMEDIES.

The damage caused by tainted milk is so considerable in its effects on the cheese made from it, and the consequent lower price for which the cheese must be sold, that I have made the matter a subject of special investigation. It is also a fact that such cheese will not keep well, rapidly goes down in quality and will soon become unpalatable. It will be seen from the reports that the factorymen mostly attribute the cause of tainted milk to a number of reasons. This is doubtless true. There are reasons, however, beyond any mentioned, which have a direct bearing on the question, and which require careful scientific investigations to determine.

There seem to be different degrees of taint, as would be natural, if caused by food or water, and also taints which are more active in their chemical development. There must be a close study of these principles and analysis of the products, to determine the more subtle and active forces which produce the fermentation and putrefaction of the milk and cheese.

But few cheese-makers are much versed in the laws and principles applicable to the manufacture of cheese, and the result is, not all succeed in making an acceptable cheese out of tainted milk, and such cheeses are cut in price in the market from two to three cents a pound. This makes a serious loss to patrons and damages the general reputation of the output of the factory. This constant loss should not be, and the remedy lies more in prevention than in cure; and this must come from a more thorough and general education of the dairymen, with whom the trouble arises. It is well to furnish the factorymen as much knowledge as is

possible, in fact it is a necessity, until there is more care had in the handling of the milk on the farms and in its production. The causes of tainted milk, as will be seen by referring to the reports as given by the cheese-makers, are varied and yet quite specific. A distinction must be made, in discussing the subject, between taint in milk and simple odor. Taint carries with it the elements of incipient putrefaction; which means it is on the way to decay. Odor, on the other hand, may be much less objectionable and may be harmless except in imparting a disagreeable smell or scent. The eating of fragrant weeds will produce odor, and the aroma of fresh grasses is desirable in butter and is sought for. So is the odor of well-cured green hay and all fodder plants. Such odors or tastes in food do not cause the taint which produces the "floating curds" and the tainted cheese. There are weeds of a strong medicinal or purgative nature, or perhaps a bitter taste which may act upon the secretions of the cow and excite fermentation, or even help to form ferments. It is safe, then, to adopt the theory of many of the factorymen that one cause of taint is because of weeds in the pasture. The remedy for this is the killing of the weeds, and so get rid of this line of possibilities, and also make room for more grass in place of the weeds. "Bad water" is quoted as a frequent cause. This is doubtless more true in midsummer when the streams become low, and the springs also. At this season of the year, when the cows are compelled to resort to low places and water holes for drink, they imbibe water foul with decaying vegetation, and, perhaps, animal, and containing more or less of vegetable and animal germs of decay. These taken into the system may act on the food with which they are mingled, and, being carried into the circulation, affect the secretions. Bad water will poison the blood and produce eruptions on the surface of the body when there are any abrasions of the skin, or even without. This being the case it is to be expected that it will affect the secretions, and undoubtedly does produce fermentation which does its work in the cheese vat. It will not do, then, on the dairy farm, to compel cows to hunt their drink from reeking water-holes or miry sloughs. Pure water must be provided, and an abundance of it. If there are not ample springs and clear, running brooks, I

recommend wells with windmills to raise the water. With a considerable fortitude some cheese-makers give as a reason of tainted milk, "dirty stables and too much manure in the milk." There is no doubt but that the average dairyman may take a hint here and improve in the care of his cows. A dirty and foul-smelling stable, and a dirty and manure-daubed floor, are not the things either to milk in or for cows to lie upon before being milked. If the udders and teats should be washed before milking it would help matters and prevent the milk from becoming tainted from this cause. The scarcity of water is a potent cause of the development of taint in milk. I may add, in this connection, an important fact which very few dairymen seem to understand or to appreciate, that anything which tends to increase the heat of the blood, or to send the temperature of the cow above a normal condition, will affect the milk in the udder, and begin in an active manner the taint, so-called, or beginning of putrefaction. This fact must not be forgotten—the scarcity of water will produce fever in the blood and this will in turn affect the milk secretion. Chasing cows by dogs will do the same thing. Compelling them to stand exposed to the hot sun in sultry weather, driving long distances in the heat, fright, or any other exciting cause which heats the blood will do the same thing. Odor from carrion carries with it germs of putrefaction and will taint milk when it comes in contact with it, and so will rank odor from foul stables. When the cows are allowed to, or when they do, gorge themselves and the stomach is filled with gas, the secretion will be tainted. As I have said before all fermented foods, such as sour whey, distillery slops or any food undergoing putrefaction will produce taint in the milk and is unsuited for making milk either for cheese or butter. Eating too much rank clover will produce flatulency and create gas which will affect milk. While these are all valid reasons for producing milk taint, the chief one has not yet been mentioned by me. It will be observed that "want of care" of the milk is frequently mentioned in the reports. This is the ground where the principal trouble lies. The cows are milked at night and the milk is strained into the can and left without aerating till morning, when it is carried to the factory, which is the chief cause of "floating curds." In every herd of

cows there must necessarily be different physical conditions. If but one cow is sick or has been put out of her normal condition by heat, water, food or excitement, so that in her milk the germs of ferment *have begun their work*, there will be enough seed to affect the whole mass of milk in the can and by the time the contents of this can is mixed with that of the vat there is developed enough ferment to affect the whole vat of milk. This would be especially true if the milk was thus out of order when put in the night before. Milk should never be shut up over night in a tight can. A fine screen might be put over the can to let the animal odor out and at the same time the screen will keep out flies or other insects. I want to urge upon all dairymen to thus ventilate their milk. The shutting up of milk in a tight vessel will always develop more or less taint in the milk. Of course this development will be greater in hot, sultry weather, because these conditions are more favorable for the growth of the germs. These germs of ferment are in the milk and come to it from foul air at all times when it is exposed, but it has been demonstrated that they are a thousand fold more active and damaging when the milk is shut up in a hot can. The milk should be stirred or poured from one can to another to air it thoroughly. The terms "taint in milk" and "animal heat" seem to be the same thing in the minds and expressions of dairymen, but a moment's reflection will show the error, as animal heat is simply heat, and is a different thing from taint or the elements of putrefaction, which give off a smell. The cooling of the milk is important, after aeration. It should not, however, be made excessively cold, as this is an injury, but it should be made cool. This, however, does not destroy germs, but it holds them in check, only to be more rapidly developed where the heat is favorable. Aeration or ventilation of the milk is the most important of the two things to do, and this should always be done in a pure atmosphere. The morning's milk should not be mixed with the night's, for this restores the degree of heat to the mass, which sets the germs of ferment actively at work, and during the transit to the factory, or on the milk route peddling the milk, the whole mass is injured. The night's milk should be kept in a separate can and delivered in a separate can. If milk is stirred a few times and kept in a room where the

temperature is not above 60° any further cooling is not necessary over night.

I have said under another head that the cans must be *scalded* out to kill the germs of ferment, as nothing else will destroy them. *Cold will not do it*, but only holds them in check for the time being, to work with reserved force and numbers when the conditions are favorable.

There must be some system devised to prevent one careless, indifferent or ignorant man from doing so much damage to others by the want of care of his milk. This indifference, or ignorance, is by far too general and subjects factories and patrons to great losses, besides lowering the standard and price of cheese.

THE CHEESE BRAND—RELATION TO SKIM CHEESE— THE GENERAL INTEREST.

With a view to prevent deception in sales in dairy products a law has been enacted providing for a State brand to be put on "full cream cheese," which brand or device contains, "New York State full cream cheese." The purposes of this law were so wise and business-like in their character that it would have been supposed that every factory, company or whoever contributed to the business of cheese-making anywhere in this State where full cream cheese was made would have availed themselves of the privilege and benefits of such an advantageous distinction. Such, however, is not the case. This department has provided these brands and supplied them to all who have applied, but, as the reports made herein show, it appears but a small portion of the makers of full cream cheese have asked for them and use them on their cheese. Some do not favor them, giving no reasons; others express an approval of the brand, but at the same time they have not availed themselves of its use. The general report goes to show that the patrons of cheese factories, as a class, have not appreciated the benefits which the State brand was supposed to be able to give to our State cheese. The makers are under the direction generally of the owner or patrons, as the case may be; therefore it is to the latter class that we should look for the responsibility in this

matter. It is plain to me, and it must be apparent to the Legislature, that more time is required to bring about among our dairy-men a fuller and higher appreciation of the business principles and wise purposes of the laws in connection with their occupation. It is clear to my mind that if every factory in this State which makes full cream cheese should stamp them as such it would tend to prevent deception and raise the general character of the full cream cheese product of the State. I can see clearly why factories which make in different parts of the season a full cream and skim cheese do not wish to use the brand and why all factories which make skim cheese do not advocate the discrimination which the brand would make in the output of the State. It is generally believed that the great amount of skim cheese made in this State injures the reputation of our makers, lowers the standard of the cheese and lessens the demand for it. The skim cheese is sold by the makers or shipped by them to be sold as skim cheese, but at the same time it is frequently colored and fashioned, as far as possible, to resemble the full cream cheese. It is purchased by the retail grocer as skim cheese, and he pays a lower price for it. It is rarely ever sold as skim cheese to the consumer. It is sold as *cheese*, and the consumer who buys it is soon converted to the notion that he does not like cheese, and if it comes from New York he especially dislikes New York cheese. There must be confidence in the product and in its value if consumers are going to want it and are made willing to pay a good price for it.

I am aware that the makers of skim cheese present the argument, that if New York skim cheese is branded as such and the skim cheese of other States is not, that the skims of other States will be sold at an advantage, while the New York skims must be sold for what they are. This argument presumes a fraud somewhere, whereby the consumer is made to suffer as well as the New York maker. There is not a wholesome appreciation yet of the benefits to be derived by a general as well as special raising of the quality of our cheese. In the markets of the world, as well as at home, this high and general reputation would stimulate demand and add immensely to the value of our dairy products. Some makers object to using the State brand because it might bring their goods down to the general level. I can not see any

point to this argument. The maker who esteems his goods better than those of his fellows can still put on them his special brand and by adding that of the State he helps to elevate the character of our cheese and encourage its consumption. A large majority of our people believe that it would be a great advantage to the cheese interests of the State if the world knew it to be a fact that every cheese made in New York was entitled to receive the State brand, "Full cream cheese," and a greater credit, if every cheese was so branded.

I can not close this subject without urging dairymen and cheese-makers to occupy the highest ground possible in all the surroundings of their business and in the products emanating from their hands.

By chapter 298 of the Laws of 1888, the New York State Dairy Commissioner is authorized, empowered and directed to, "Appoint and employ expert butter and cheese-makers not exceeding five in number, whose duty it shall be, under his directions, to examine and inspect butter and cheese factories and the methods employed therein, and attend at such agricultural fairs, institutes, meetings and conventions, within the State, as shall be designated by the commissioner, to impart thereat information as to the best and most approved methods of making butter and cheese and improving the quality thereof."

In pursuance of the provisions of the foregoing statute, I employed Mr. W. W. Hall, of Gouverneur, St. Lawrence county, G. A. Smith, of Frankfort, Herkimer county, and M. T. Morgan, of North Winfield, Herkimer county, as cheese-makers, who have, since the date of their employment, been engaged in the discharge of their duties as defined by the statute. They have attended and held several meetings at which the method of manufacturing cheese was exemplified, and instruction in the art of cheese-making given. This work has been eminently satisfactory and successful, and has everywhere been received with approval by those most deeply interested.

Mr. W. H. Richardson, of East Aurora, Erie county, was also employed to do some of this work, but his business engagements were of such a character that he has not been able to give very much attention to it.

Mr. F. D. Curtis, of Charlton, Saratoga county, Mr. E. S. Munson, of Franklin, Delaware county, and Mr. W. H. Gilbert, of Oswego county, have been employed as butter-makers. A considerable work has been done by these butter-makers, but for the present season our attention has been mainly directed to an effort to improve the quality of cheese in our State.

The reports of Messrs. Hall, Smith and Morgan will be found in the appendices, and give somewhat in detail a statement of their work as expert cheese-makers under the provisions of the statute above mentioned.

I have prepared a circular of which I have distributed by mail and otherwise, several thousand copies, amongst the dairymen and cheese factorymen of the State. That circular is as follows :

[Circular.]

THE DAIRY INTERESTS OF NEW YORK.

REPORT OF THE BUTTER AND CHEESE COMMITTEES AT THE UTICA CONFERENCE, JUNE 1, 1888, AND COMMENTS THEREON BY THE DAIRY COMMISSIONER.

This department is impressed with the importance of dairy husbandry as a leading, if not a necessary factor, for the future prosperity of the agriculturists of this State. In this spirit, and with a view to aid in the development of dairying in all its branches, this circular has been prepared, and is given to those interested with the hope that it may conduce to the general welfare.

It does not attempt to cover the whole ground, nor to go to the depths of science ; but in a plain and practical way to give a few additional hints and facts, which may aid in insuring a better product from many of the dairies of New York, and consequently more income for those engaged in this business. We have found that competition is so sharp from the northwest and other sections, that New York dairymen must avail themselves of all the intelligence and appliances within their reach. We can not stand still as a State and expect to keep a profitable hold on the market.

It matters not what has been ; times change and consumers get new notions and tastes, and we must come right down to the

present and put our products in the form and character that people want now, if we get the best prices.

With this view I requested the Hon. Josiah Shull, the secretary of the New York State Dairymen's Association, to call a conference of successful and well-known dairymen to meet at Utica, June 1, 1888.

Mr. Shull cheerfully complied. At this conference a committee was appointed to propose a brief formula for making butter, and also another one for making cheese. These committees were selected from each of these branches of dairy husbandry with special reference to their practical knowledge.

The committee on butter-making made a report, which, after some spirited discussion, was adopted by the conference, as also was the report of the cheese committee after a full and close discussion.

Neither of these reports were intended to be complete in detail, or to cover all of the necessary conditions essential for the making of the best quality of either butter or cheese; but rather as guides to shape inquiries, prevent mistakes, and to awaken thought and investigation.

It has become a strong conviction in my mind, that I ought to add to these guides, or general instructions, more specific rules to prevent, as far as possible, loss and disappointment.

REPORT OF THE BUTTER COMMITTEE.

It is important that the cows should be adapted to the purpose. The feed should contain the proper elements for making butter. As proper feed we recommend a mixture of bran, corn, oats, mill-feed and peas, with a small amount of linseed and cottonseed meal. This feed should be mixed in proper proportions. The cows should be fed and milked with regularity. The water should be pure, the stables well ventilated, the cows kept clean, and the most careful and painstaking care had in all places for cleanliness. The cows should be milked, if possible, always by the same person. As soon as the milk is drawn it should be set for the cream. The utensils should be scalded always after being used, and kept perfectly clean and sweet. The cream should be raised within twenty-four hours, after which it should be kept at a temperature

of 45°, until the ripening process begins. To perfect the ripening, warm the cream up to a temperature of 62°, and stir it frequently. Then churn at a temperature varying from 62° to 68°, according to the season and surrounding temperature. No cream should be added after the ripening process has begun. When the butter has come, about the size of kernels of wheat, draw off the buttermilk and put in cold water. Agitate the butter a little, then draw off the water, and repeat this process until the water runs clear. Take the butter out carefully and weigh it. Then place it on the worker and salt it, one ounce to the pound. Then work the salt in and pack the butter immediately.

F. D. CURTIS, Charlton,
W. H. GILBERT, Richland,
NATHANIEL MANN, Ballston,
E. P. MUNSON, Franklin,
H. O. HALE, Norwich,
WM. DOUGALL, Schenectady,
MILTON HOAG, Norwich,
Committee.

The proper elements of food are a combination of nitrogenous and carbonaceous, at the rate of one of the former to four or five of the latter. Nothing is better for either butter or cheese-making than the natural grasses of our pastures. This is always a complete food. In summer it may be supplemented with extra food, for instance, two parts of wheat bran, one of corn meal and one of cottonseed or linseed meal, by weight. Oats and corn, ground and mixed, make excellent food for improving the quantity and quality of milk. If peas could be mixed with it the ration would be improved. The first ration named is the best calculated to produce the richest milk. A strong ration would be four pounds of bran, two of cotton or linseed meal, and two of corn meal. Half of this ration, fed daily during the milking season, will be found to keep up the flow of milk and to increase the yield of butter, and to keep the cows in a thrifty and fine condition, especially where the pasture is reduced.

When there is a scarcity of food in the fields, it is obvious that to get a flow of milk and to keep up a profitable income from the cows, extra food of some kind must be provided. Oats, cut, when

coming into the milk state and fed in the stable, are valuable; early corn or peas can be utilized in the same way; and clover all through the season, with millet at the end; and the later varieties of fodder corn. I am satisfied that, with a fair price for the product, it will pay, especially in hot weather and when the flies are troublesome, to give cows a little meal each day. It seems to be a pity to winter cows and lose a paying income for the lack of a little extra food, yet such is the condition of far too many dairies. I dwell on these two points, to-wit: Adaptation of the cow and the food to the purpose, because experience has taught me, as well as others, their great importance. At two of the butter conferences held the past summer, under the auspices of the New York State Dairymen's Association, it was found that at Cornell University and at Kirby Homestead, respectively, a pound of butter was made from fifteen and one-half and sixteen and one-half pounds of milk. The average amount of milk required is about twenty-five pounds. The better the milk the better the cheese; so, that to get a superior article of cheese, the milk must rank high in solids and butter fats. The extra feeding of cows is a well-balanced business, as the return is speedy for the investment, from the enhanced yield and the enriching of the farm.

Well-matured corn fodder is a valuable aid and a proper food. The nearer this fodder corn is to perfect stalks and ears the more valuable it is. It is a poor investment when too wide of a natural growth. No perfect article of either butter or cheese can be made when the cows drink stale water or water impregnated with foul odors or germs; such water will taint the product. This fact can not be too strongly impressed upon dairymen. There is an evident sympathy between the surroundings and treatment of cows, and the milk secretion; hence, there must be care and great regularity in their management or there will be loss. The cow, through her nervous system, is easily affected; the nervous connections are acute and seem to be constant. For these reasons there must be gentleness and freedom from excitement or there will be a shrinkage in the flow of milk.

The food should be given with regularity, as this will lessen excitement and keep up the tone of the stomach, and allow for a full and complete digestion and rest. Frequent change, or any

change, in the milkers, the food, times of feeding, and in the general management of the cows, is a disadvantage. Dogs are always a damage in the care of cows. The importance of cleanliness is set forth by the committee, and still its importance is not fully appreciated. Shiftlessness or neglect is uncleanness in its results.

To leave the milk-pails unwashed over night, even though no dirt is added, and they may be as clean, apparently, as they were when used the night before, is a dangerous mistake. During the night incipient putrefaction may take place in the milk left in them, and these germs will affect the milk put in them, and its product. There is something more than cleanliness required in the dairy. There must be the purifying effects of boiling water.

The importance of immediate cooling for the milk is not enough appreciated. This neglect, together with lack of thorough ventilation, is the chief cause of much poor butter and tainted curd, and bad smelling, tasting, and poor-keeping cheese. I can not be too emphatic on this head.

Milk designed for any use should never be shut up in tight vessels and so left to retain all the animal odors and its natural temperature.

The sooner milk is cooled and well ventilated at the same time the better it will be for any use. Every dairyman who handles milk should have a cooling room where the cans of milk may be set away from all odors, and in tanks filled with cold water, or with ice put into them.

I do not recommend excessive cooling. To cool the milk down to 45° is about right. If possible it should be kept there until it is taken to the factory or to be sold to the milkman. Cream will rise sooner with a lower temperature, but it is doubtful if the product is so good as when the cream is raised at a temperature of about 45°, or a little less. I would not advocate raising cream at a temperature below 40°. The cream from milk thus cooled down is thin and green, or immature, and must be given time to ripen or to come to perfection. It must then be handled with care and be kept under proper conditions of aeration. The surroundings must be pure, free from taints, and the cream stirred frequently that it may become well oxidized. This is a part, and

an important part, of the ripening process, during which the full properties of perfect cream are developed. These remarks and the statements of the butter committee apply to cream raised by the cold process, that is, by the aid of ice or cold water. People who have favorable surroundings or conditions for raising cream without resorting to the creameries can reach the same results in the preparation of the cream, without the formula; but, at the same time, it must not be forgotten, although the same end may be reached, the same principle or laws must be obeyed. The following comments on the formula of the butter committee, expressed by the chairman, it seems to me clearly set forth its meaning, and bring out many important facts which may be useful to dairymen.

I quote from the *Country Gentleman*, July 12, 1888.

The committee did not attempt to state exceptions or to go into particulars. As they are important, I append them, although the ground has been partially covered.

Our design was also to correct some common and damaging practices, of putting cream together or mixing it up to the time of churning, by which practice much butter is wasted. Mr. Gilbert found a loss in this way of two pounds of butter from 100 pounds of milk. By "ripening" cream is meant a full aeration or oxidizing, which gives it the best flavor. To bring it to the highest degree of perfection in this respect, it should be stirred occasionally and be kept in a cool and even atmosphere (say 45° as a standard) for at least twenty-four hours after the last batch of cream has been put in. This is done to insure uniformity in the cream in its ripeness — to give time for it all to ripen. At the end of the twenty-four hours it may be warmed up to about 60°, when acidity will develop, and it is fit or in the best condition to churn.

This is a rule or a good law. Circumstances may modify the conditions or make radical changes, such as cool weather, hot, murky weather, thunder storms, food, pure water, etc.; but the nearer the rule can be observed the better will be the butter for cream skimmed sweet. Sourness is not ripeness. Sourness does not get the most or the best butter, if it is carried beyond the perfect point, which is simply "acid." A continuation of acidity

will lessen the amount of butter and make a miserable quality, and if it is left to do its full work it will eat up all of the butter fats and there will be no butter. The committee were aware that cream is kept before churning at a considerable range in temperatures, and also churned at a temperature all the way from 58° to 68° , or perhaps with more variations, and some of the butter made at these extremes is good, but for a safe and sensible rule a medium standard is obviously better. Cream of different degrees of acidity will not churn evenly, hence there must be a time when to stop adding fresh cream, and the committee gave this time the designation of beginning "the ripening process." This should continue twenty-four hours, as "the ripening process" is slower, with a cool temperature, and more complete than in a warmer temperature, where it will speedily get sour and putrefaction may begin, when it must be churned or lose flavor and the quantity of butter be reduced.

Of course no fresh cream should be added *after* it has "come to perfection," as this cream would be most likely to be found in the buttermilk. It should also have a much higher temperature in which to be churned than if sour. If the cream is kept in a temperature of 55° to 60° , it will probably get sour in twelve hours, although sweet when skimmed. This for a good rule would be hurrying things too much. The committee had in mind, in their formula, deep setting and sweet cream. We were aware that when cream is raised in milk-pans, under favorable conditions, the ripening process goes on all the time, and it only requires thorough mixing to prepare such cream for the churn, and cream thus raised will make choice butter. If left on the milk too long it will not. Cream skimmed sweet and kept at a temperature of 45° , with a cool atmosphere surrounding, will keep without much, if any, change to sourness, for several days, perhaps, but this does not affect the principle involved to ripen it right, to raise the temperature at the right time and to churn it right. If set out of the refrigerator at night, into the open air, it will usually be acid enough the next morning, and thick. Or if the atmosphere is not right, it may be warmed up to the right degree to insure these conditions. The cream of two days may be mixed and kept all right by keeping it all in a temperature of 45° , and mixing it well,

when each lot is put in, keep the mass twenty-four hours after the last lot is put in, or only twelve if need be, and then churn. As a rule, better butter would be had to mix only one day's cream and churn daily. We should avoid old stale cream; this was one of the rocks the committee wanted to put a beacon on, as well as the other — not to churn unripe and uneven cream, and to make sourness alone the pilot, rudder and port.

I have alluded to the importance of ventilating and cooling milk. There is a great loss in the quality of cheese on account of floating curds. These cheese, the result of a beginning of putrefaction and the creation of carbonic acid gas, are unquestionably the natural development of fermentation and the chemical changes which follow the want of care in the handling of the milk. It was found as stated in the *Country Gentleman* by an agent of this department, that it is lack of full ventilation, in connection with cooling the milk, that is the chief, and in fact, almost entire cause of tainted milk taken to the cheese factories and the milk sold on the streets.

Excessive heat of the sun, cows being worried by dogs, or made hot from any cause, will start the milk on the way to taint, before it is taken from the udder; but all these reasons, in connection with bad water and food, are rare, as compared to lack of airing and cooling it as soon as drawn from the cow. These impressions are fortified by the experience of others. At one of the cheese factories in Montgomery county no tainted milk had been received, or floating curd shown itself, since the patrons, who lived near by, had brought their milk to the factory night and morning, where it had been put into the vats with cold water turned on, and running all around it, and the milk stirred and well exposed to the air. In the spring, however, when the milk was kept at home over night, floating curds were common.

At other factories it was found to be a very rare occurrence for tainted milk to come from a dairy where the milk was brought night and morning. The most intelligent cheese-makers I have met with agree that ventilating and cooling the milk over night are necessities where it is expected to make good cheese.

Another important fact experience has taught, that when milk has been cooled to a temperature, and then exposed to the hot air, it will speedily spoil. I quote again from the same authority facts which must not be overlooked.

It has been found that when cream has been raised at a temperature below 40° , that it will not keep as well, nor its product, the butter, as when the cream is raised at 45° or above 40° . Just exactly why this is so I can not tell. We know that when meat or fruit is kept just above the freezing point that both will speedily decay when exposed to the air, and rapidly if exposed to warm air. The germs of fermentation and decay are ever present in milk and cream, and it really requires but a very short time for them to develop and begin their work under favorable conditions, and the chief one is heat. These germs may be getting ready, developing, or are being deposited, or both, under the colder degrees, and start at once into active work as soon as the influence of the warmer temperature is felt. This must be so, or why would not chilled meat, milk, butter, fruit and other things keep as long as the fresh or the original articles when they are exposed to the air? This law of speedy decay being admitted, when milk has been chilled to so low a temperature as 40° , it follows that it never should be done when its preservation is desired, or the product it may make, either butter or cheese. This law must not be overlooked.

It is a mistake to mix the chilled milk with the fresh, as the latter will be injured by the former. Two rules must be observed right here: First, do not chill milk to be used or manufactured below 40° ; and second, do not mix such milk with fresh milk in the same can to sell, or to take to the cheese factory. The margin is so close, or rather the line of injury, that the night's milk should never be mixed with the morning's, until ready to work up.

My observations in this respect were verified by Mr. Nellis, of Fort Plain, whose milk tested very high. He said he had found out for a certainty that mixing the night's milk, which had been cooled, with the morning's, injured the quality of the united, or mixed milk. He kept them separate and sold them separately. It would be a good plan to sell the night's milk first.

REPORT OF THE CHEESE COMMITTEE.

The committee on cheese made a brief report for a general basis for cheese for export—

First, the milk is supposed to be of a normal standard. The temperature at which to add the rennet should be 80° to 86°. Use sufficient rennet to coagulate in fifty to sixty minutes. The time to cut curd is when it will split clean and free from the finger when put into the curd. Agitate the milk slightly until signs of coagulation appear. Stir gently with the hands for about five minutes before heat is applied. Apply heat gently, using one hour to bring the heat to 98° in summer and 100° in the autumn. Stir for ten minutes after the mass is heated to the desired point. Then stir occasionally until the curds seem well cooked and are firm to the touch. Now remove the whey. If the maker desires to use a curd sink, let him now throw the curd into the sink and let it drain. Stir it well, and keep from matting until ready to apply the salt. If the maker wishes to grind, allow it to pack in the vat or sink. After the degree of acidity desired is reached the curd is to be cut up and ground. The salt can now be applied. In either case the curd must be kept warm. Do not let it get below 95°. Put to press at about 80°. Apply the pressure gently for the first hour. Keep the cheese in the press until after dinner the following day. Keep all cloths, followers and hoops clean and sweet. Scald them every day. This is necessary to keep a clean, bright surface. Keep the cheese shelves clean. The temperature of the curing room should be kept at about 70°, and the room well ventilated; yet no wind should be allowed to blow on the cheese. Know that your thermometers are correct. To make home-trade cheese, set at lower temperature, cook lighter, stir less and salt less. Make it a point to retain moisture in your cheese.

F. BLANDING, Hubbardville,
F. W. EDMUNDS, Sherman,
W. H. LEWIS, West Potsdam,
R. McADAM, Rome,
GEO. A. SMITH, Frankfort,
H. BROCKWAY, Richfield Springs,
J. B. HAWES, Antwerp,
LEVI C. SMITH, Cedarville,
Committee.

Under the provisions of the law providing for cheese and butter instructors, a large number of meetings or conferences have been held and instructions given in these branches of husbandry. These meetings will be continued, as many as it is possible to hold. It is the aim to give both oral and exemplified instruction in butter and cheese-making, and to cover as much territory as is practicable.

THE MODIFIED CHEDDAR PROCESS.

The following is "The Modified Cheddar Process, as used by the cheese instructors of the New York State Dairy Commission:"

The milk is placed in the vat and heated to from 82°–84° Fahr. in the warm weather of the summer, and to 86° Fahr. in the cool weather of the fall. If color is to be used, it should be stirred in thoroughly before adding the rennet.

Sufficient rennet is used to coagulate the milk in from twenty to twenty-five minutes (two and one-half to three ounces rennet extract) and bring the curd into condition fit to cut in from fifty minutes to one hour.

The extract or powder, on account of uniformity of strength, is considered safest to use, and there is not the liability to taints that there is when makers prepare their own rennet in tubs, jars, etc.

The curd is then cut lengthways of the vat with the horizontal knife.

The cutting is begun as soon as the curd will cleave clean from the side of the vat, or break clean before the finger, or cut without breaking before the knife.

It is then cut lengthways and crossways with the perpendicular knife.

The cutting should be all done as soon as possible after beginning, as it is claimed that if the curd is in proper condition, or, in technical language, if it is just hard enough to begin on, the quicker it is cut the less waste there will be.

If the curd is too hard the knife will break off fine particles, which are lost in the whey.

When the cutting is completed the curd is gently agitated for about fifteen minutes.

The heat is then slowly applied up to 90° Fahr., then more rapidly, until the highest point is reached, from 98° to 102° Fahr. In order to preserve the most fat the lowest temperature which

will cause the complete expulsion of the surplus whey should be used, though with some milk it will be necessary to heat up to 102° Fahr.

Great care should be taken, during the heating process, to stir so thoroughly that not any part of the curd will become overheated by resting too long upon the hot tin; because this would melt the fat and partially destroy the activity of the rennet in that portion of the curd.

Keep the curd agitated till it reaches the stage of contraction at which it will not pack.

The vat is then covered with a cloth in order to retain an equable heat through all parts of the mass, stirring under the cover occasionally to keep the curd loose.

The curd is allowed to remain in this condition until sufficient acid is developed to show a quarter of an inch of fine thread by the hot-iron test.

The whey is then all drawn off and the curd packed about equally on the two sides of the vat, leaving a clear space in the center, for the purpose of draining.

After a few minutes, and for the same purpose, the layers of curd are cut lengthways through their centers and again crossways into strips or blocks about twelve inches long; the center strips are turned bottom side up and placed upon the outside strips; keep well covered with a cloth.

In ten minutes or so the two piles are turned over and placed in the center of the vat, one on the top of the other, forming one row of four layers.

Up to this point the chief object of the process has been to separate the whey from the curd, but from this point out the process is distinctly one of digestion or "assimilation."

The pile is left lying in this way for a time, and, as it flattens out, it is again cut and doubled up and kept as close as possible in order to retain the temperature.

It is important that, during these manipulations, the temperature be kept up to about 98° Fahr., as this is the most favorable for the maturing of the curd, and to have it assume that flaky appearance and velvety feeling which it must do in order to be a perfect curd.

If, from any cause (as tainted milk, etc.), there is a development of gas at this stage, the packing must be continued until the gas cells become flattened and the curd appears solid and shows about the same texture as a perfect curd.

The production of lactic acid fermentation is important here to overcome putrefactive fermentation which is very liable to develop, especially in hot weather, and which is very destructive to the flavor, quality and firmness of the cheese.

When the curd has reached the proper stage of digestion it can be torn into strings and "ribbons" the whole length of the piece like the inner bark of an elm tree, and the torn surface has a fibrillated appearance like the cooked flesh on a chicken's breast.

The curd is now cut up into strips, spread out in the bottom of the vat, allowed to cool down to from 88° to 85° Fahr., and the nground.

The salt is applied as the curd passes through the mill. The salt is then stirred in and the curd is reground and put to press.

The pressure must be slight and applied gradually till the whey is pressed out and the rind is formed.

If it is left in the press from twelve to eighteen hours it will retain its form better and be more solid than if pressed in less time.

The above method is based upon the use of pure milk. To make a close, meaty cheese from floating curds, it is necessary to modify the process. In this case we use the same amount of rennet, cut a little finer, and stir from ten to fifteen minutes without steam.

Apply the steam slowly at first, taking plenty of time for the temperature to rise to the highest point needed (100° Fahr.). The curd must not be allowed to pack on the bottom of the vat. Use every means possible to drive out the surplus whey.

When the acid shows one-half inch on the hot iron draw off all the whey, pack the curd in as small a space as possible, cover the vat so as to retain the heat, cut the curd into strips often, and repack.

When the gas has fully developed, run the curd through the mill, repack it and keep it covered so as to retain the heat, letting in dry steam under the cover to warm the curd, if necessary.

When the gas-holes become flattened and the curd appears close and solid and shows about the same texture as one made from good milk, cut it up into strips and spread it out thin over the vat. Then allow it to cool to about 85° Fahr., grind, salt the same as for a good curd, and put it to press. Allow it to remain in press as long as your time will permit, at least eighteen hours.

CARE OF COWS, ETC.

Cows should be driven slowly, and never by dogs. The feeding of sour whey, or any substance in a state of advanced decomposition, should not be permitted. Brewers' grains and other cheap foods sometimes fed to cows, if fresh and sweet, have not been found objectionable when fed together with natural and wholesome cattle food, and not in too large quantities. In locations where these cheap foods are easily obtained the tendency is to over-feed with them, which is sure to injure the milk product.

Cows should have daily rations of salt or free access to it, and all the pure water they want.

The milking should be done in the most cleanly manner possible. Always, before beginning, wash or brush all the dirt from the udder and surrounding parts. Use nothing but tin milk pails. Strain through a double cloth, which must be thoroughly scalded every time it is used.

The milk-can should be kept scrupulously clean. First, rinse it with cold water, then scrub it with a brush, hot water and salt, and thoroughly scald. It should stand under a shed where the atmosphere is perfectly pure and sweet, away from the odors of the stables, barns, pens, swill-tubs, etc. Old rusty cans and pails, with the tin worn off, must be discarded, for the iron absorbs and retains a portion of the milk which can not be gotten out, and is liable to taint the new milk.

The milkings, both night and morning, must be thoroughly aerated as soon as drawn. This is best done either by using an elevated strainer or by "pouring" with a dipper. By this process the atmosphere helps to drive off the animal heat, gases and odors, and by its more thoroughly mixing with the milk promotes oxidization. For the same purpose the milk should be stirred in the can from time to time and the cover left off over night. It can not be too strongly impressed upon the mind of the milk producer that the thorough aeration of milk is essential to the manufacture of first-class dairy products.

Respectfully yours.

J. K. BROWN,

New York State Dairy Commissioner.

Since the foregoing circular was issued, Mr. Geo. T. Powell, of Ghent, N. Y., has furnished this department with a statement of the methods pursued in the manufacture of butter at the creamery located at Chatham, N. Y., and known as "The Columbia County Creamery Association." At this creamery, under the methods pursued, a very superior article of butter is made, and the very full and complete statement of these methods by Mr. Powell in the following communication to me will be of great interest to the dairymen of this State :

Mr. J. K. BROWN,

New York State Dairy Commissioner:

DEAR SIR.—The Columbia County Creamery Association, composed of farmers of several towns, collects cream upon the cream-gathering system (Cooley plan) and has it manufactured into butter at the factory. The first requisite is a uniform system of setting the milk, at a temperature, as near as it can be had, of 45° in summer and 42° in winter.

All kinds of food, such as turnips, cabbage, or anything that would impart a bad flavor to the milk is ruled out, and cottonseed meal is limited to two pounds per cow, per day, though it is not used to any extent in feeding.

The cream gatherers are instructed to inspect the stables, to see if they are kept in a clean condition, and also the cows, creamers, cans, etc., and report any carelessness or negligence in these important particulars.

Farmers are urged, as far as possible, to select cows for their butter qualities, that cream of uniform quality may be produced.

When the cream reaches the factory it is usually at a temperature, in summer of 60°, and is kept twenty-four hours, when it is sufficiently ripened to churn.

A very important part of the management is in the ripening process. It must be thoroughly oxidized and stirred. We use a cream agitator in our cream vats that more thoroughly stirs the cream and in much less time than can be done with a rake or paddle. The cream should be churned, if possible, just as soon

as it reaches the acid stage, and at a temperature of 62°. The churning should continue until the butter begins to separate, in about the size of mustard seed, then run in a portion of cold brine and churn a shorter time until the granules are more perfectly separated and in regular form like fine double B shot. The buttermilk is then run out, and after thoroughly drained out, run in brine at a temperature of 45° to about the amount of the buttermilk, and, after agitating, churn a few times, draw off this brine, running in brine or cold water the second time, repeating the same agitation of churn until, when the water is finally drawn off it runs nearly or entirely clear. After the water is thoroughly drained from the churn, remove butter to the worker, salting with one ounce to the pound, unless otherwise ordered, mixing salt thoroughly through butter with the paddle. If time can be allowed let butter stand for an hour, then work lightly for the purpose of incorporating the salt thoroughly and putting butter in proper shape to print or pack. The butter is then put in neat packages and is ready to send off.

In winter making when cream comes in at a temperature of 45° to 50°, it should be heated to 65°, remaining about thirty-six hours during the ripening process. The churning should be at about 64° in winter, the brine being made at a temperature of 50° to 58°, according to the weather. The other details in management are similar to the summer making.

The advantages of coöperative dairying are many. Many farms do not have the proper facilities for handling cream and butter, and when such send in their cream to the factory where the work is all done systematically under the best possible conditions, the gain is very much over the same work done upon the farm; a fine, uniform product is turned out, the best of packages are always used, and shipments to customers are made with a regularity such as can not always be done in small private dairies. In the coöperative, as in the private dairy, the highest degree of excellence will always give most satisfactory results.

GEO. T. POWELL,
President Columbia County Creamery Association.

With about 1,500 of these circulars was sent a blank, asking information with reference to the dairy interests of the State, of which the following is a copy :

1. Would you suggest any changes or modifications of the method for making butter as set forth in the report of the committee. If so, please state them briefly?

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2. Do the dairymen of your vicinity generally make choice, first-class butter?

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3. If not, why not?

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4. If you have any changes or modifications of the methods for manufacturing cheese which in your opinion would be an improvement upon that method, you will confer a favor if you will state what they are?

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5. Is the cheese manufactured in your vicinity bringing usually the highest price in the market?

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6. If not please state reasons.

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7. It is important to the dairy interests of our State that every valuable idea or suggestion with reference to that great industry be obtained from all available sources.

Any information you can give will be a contribution to the object desired, which will be appreciated by your fellow dairymen.

REMARKS:

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A large number of these blanks have been returned to us, with replies to some, if not all, of the interrogatories, many of which are interesting and valuable.

REPLIES.

To the first interrogatory, viz.: "Would you suggest any changes or modifications of the method of making butter as set forth in the report of the committee? If so, please state them briefly."

"I think that butter should stand from six to twenty hours after salting and then be worked the second time. If the salt is fine it need not stand as long between the workings as it should if the salt is coarse. The action of the salt upon the butter will have a tendency to expel all milky substances at the second working. We received the second premium at the International Dairy Fair held in New York seven or eight years ago, and this was our method, which was almost identical in process of manufacture with the butter that received the first premium."

"No, I would not suggest any different plan for making. The method of your committee has my hearty approval, and I think that if our dairymen would take a lesson from your honorable committee in regard to their method of making butter it would be a great advantage to them."

"I would suggest that butter should be made from sweet cream, and cows be fed grain and silo fodder."

"Think 45° too low a temperature, as in warm weather it ripens too fast in raising to 62°, the temperature at which the milk is best churned."

"I think if everyone would practice the method set forth in your report they would have a more uniform product for sale."

"I do not consider that we are prepared to offer any criticisms upon butter-making. What butter we make is made in the early spring and late fall."

"I do not think any change in the method of making butter beneficial; but think it is less liable to show white streaks if it is worked a very little the second time, having stood about two hours after salting."

"I agree with the report of the committee in nearly every respect, save two or three:

"1. I churn milk at the temperature of 58° in hot weather.

"2. I intend to get all the cream in twelve hours (I use Cooley Creamery), and I think the quicker I get cream after setting milk the more butter I get and better quality.

"3. I work butter twice. First I work in salt; then, after three or four hours, I work butter again and pack."

"Having been in the business fifteen years I can not agree with the butter committee in all points. I can until they claim that the cream should stand for a certain time at 45°, which will not ripen at that degree; but if left at 45° long there will become a flavor similar to sweet flavor which the acidity will not overcome, which is the peculiar flavor that butter sometimes has and can not be accounted for. Skim as soon as twenty-four hours. Heat to 62°, and when it gets to a tendency to be ropy it is ready to churn."

"As far as my experience has gone the committee has hit the best method for making choice butter."

"The best way I know of is to send to every butter-maker the receipt, so that there will be no excuse for not making good butter."

"Your method for making butter, as set forth in the report, is all right."

"I don't think collecting milk is a proper way of obtaining cream for the manufacture of butter."

"I would not; only that the butter be worked again, after it is salted and left to stand, say three or four hours. Great care should be taken not to work it too much, the second working being more of an inspection than anything else."

"I would retain the cream at from 54° to 56° in warm weather, and 60° in spring and fall, and churn at 58° and 60° in summer, and 62° to 64° spring and fall; I would use brine for the last rinsing of the butter."

"I should not recommend any change in the report of the committee."

"Would not change the report of the committee."

"To churn at a temperature of 56° or 60°, I think, would be better, as butter, in my mind, is not so liable to be too salty and lard-like."

"No."

"Not any."

"I firmly approve of the methods suggested by the committee, and if their methods were more thoroughly practiced generally, I think a better article of butter would be produced."

"Butter should stand in the bowl three or four hours in a cool place after it is salted for the salt to dissolve and strike through before it is worked and packed."

"I would not; they agree with my ideas as well as I could state them."

"I have had no experience in butter-making, but think the method referred to in the report would be excellent."

"I would fully indorse the method set forth in the report of the committee."

"I will differ with you some. I keep my milk at a temperature of 62° and churn from 58° to 60°. Wash it and salt in the churn. Salt about three-fourths of an ounce to the pound."

"We work our butter twice before packing. Let it stand twelve to twenty-four hours from the first to the second. Use a cloth and press the butter with the hands, as you fill the package, and you will get most of the brine. You make four or five pounds more in a sixty-pound package. It is firm and will cut well, like cheese."

Don't work so it will be salvy. We get the highest market prices for our butter in New York and Brooklyn and other markets."

"I have read the report of the committee and could not suggest anything new."

"I think the method of making butter is very good, and, if strictly followed, will bring good results."

"The only change I would make would be in salting after the butter came and is thoroughly washed. I would then work it, and, after being properly worked, would drop the butter into strong brine, made from pure well-water. Have the brine take all the salt it would and be clear and pure. Let the butter remain in the brine until it has taken in salt sufficient to preserve it. By the old way of adding salt it is seldom, if ever, distributed evenly."

"I think the method is very good."

"As regards the butter question, I am convinced that milk should be stirred whenever any is added to the vessel, so that the lumps may be dissolved. Keep in a cool place until time to change."

"I would not. Have had very little experience in butter-making, and so could not offer any suggestions."

"I think the committee's report pretty good; only I don't make any butter here."

"I think the report of the committee very exhaustive. In feeding cows, I would substitute wheat middlings instead of cotton-seed meal, as my experience has proved unsatisfactory in its results."

"No."

"I think the method of making butter, as set forth in the report, all right, if followed."

• "I can not offer anything better."

"No."

"I would suggest that instead of packing the butter at the time of salting, it should be allowed to stand after salting in a clean, cool place for twelve to eighteen hours, and then a light working again and then packed. By so doing, I think the salt will be better dissolved and the butter less liable to be streaky. The rest of the committee's report I agree with."

"I got the best results by churning at a temperature of 60° to 64°; usually at 62° never above 65°. I prefer to churn butter until

the granules are about the size of kernels of corn. I believe it handles better and can make as good an article as to take up finer. I salt in creamery one and one-quarter ounces to a pound during the summer for holding in firkins, and work immediately after churning and washing and then set away in dark and cool place till next morning and then I rework and pack."

"I do not; I believe the method is most excellent."

"I indorse the report of the committee, only I think that the best way to ripen cream is to put in buttermilk, when it is cool weather, and churn the milk as cool as possible, say in summer as low as 56° or 57° and in fall and winter 58° or 59° at the highest, and work the butter over once to get the water out before salting. Then you don't waste any salt to speak of."

"I don't see where there could be any change made so as to produce any better article than described in your pamphlet."

"We think that after the cream has been raised, it should be kept at a temperature right for churning while ripening or warmer than 45°. Think that 68° is too warm to churn at any season of the year. I would fix the temperature at from 58° to 64° according to season, etc. Think the churning should be done every day."

"I would not."

"Milk should be kept at a temperature of 45° while cream is rising. After buttermilk has been drawn off, run in strong brine at a temperature of 52°, repeating the washing with brine until water runs clear. Otherwise the suggestions in the report of the committee are excellent."

To the second and third interrogatories, viz.: Do the dairymen of your vicinity generally make choice first-class butter? If not, why not?

"They do not. First, because of a lack of knowledge in many instances of the principles that enter into the production and management of milk and cream. Second, because of want of facilities for handling properly, and in the best manner, milk and cream after it is produced. It is thought the public creameries will supply this."

"They do not. By not taking proper pains in caring for the milk and by keeping the cream too long before churning and by using poor salt."

"They do not. Not more than one in fifteen or twenty. The greatest trouble with farmers' wives is they don't know the first rule for making good butter. (This gentleman operates a creamery.) They don't have good places to raise the cream and are not neat and clean, and when they make the butter all right until the time for working it, then is when they spoil it. I have been in the dairy business ten years and I can not make good butter with a poor worker. Another reason is they salt too much, so the salt stands all over the butter. Some don't wash out all the salt from the buttermilk, and of course the buttermilk becomes rancid."

"Other sections excel us in the manufacture of butter. The butter of this section is made mostly in the spring and fall. They don't know how, and they don't give attention to providing the best rations for their cows. Butter-making is secondary to cheese-making in this section."

"No; not as a rule; but they send it to New York and the commission merchant will sell the poor and the good in a lump at the same prices, and good butter-makers and poor ones get the same prices. Over-churning, and over-working and filthiness in milking, and especially in the spring and fall. Nearly all the dairymen about here send their milk to butter and cheese factories; and creamery butter made in this vicinity commands, I believe, as high price as any butter made in the country."

"No; medium."

"Most of them do. Some have not the conveniences, and some are not particular and don't know any better. Don't try to learn to keep up with the times."

"They do, the majority of them. Of course there are exceptions. Some are too careless or slovenly to have a good article of any kind. They are too nasty about milking, and their pans and pails are not properly cleansed."

"Most of them do. If they don't I think it is for lack of care of the milk and cream."

"Some improvements could be made in the future in butter-making. There are several reasons. One great reason is that there is not pains enough taken in the care and choice of stock. Another reason is they don't endeavor to produce an article

adapted to the tastes and wishes of the people. They seem to think that because their forefathers did so, they must; when, in reality, the habits and customs of the people have changed. Of course I am not speaking in regard to all of the dairymen, for some of them have very practical and modern ideas and make a first-class article, while others do not pay any attention to rules and scientific experiments which must govern a good product of any kind."

"As a general thing I think they do not. Some are getting such prices for theirs; but the most of them do not. There are a great many reasons; among them inexperience of the butter-makers, improper care of all the dairy utensils, improper care of the cattle, and want of cleanliness in caring for, and a fit place for keeping, the milk, cream and butter. Probably not one-half of the farmers are fitted for making butter as they should be, and do not make it a study as they should."

"The dairymen don't make much butter for home use, but we have a factory that has made about seventy-five pounds of butter per day, and it is most excellent. There seems to be such a body to it. It is mostly shipped direct to New York, commanding a high price."

"With a few exceptions they do not. Because they don't feed much grain especially in the summer, and many of them let the butter stand too long exposed to the air before packing, which spoils the flavor."

"I think as a general rule our butter-makers don't observe the degrees of temperature enough to make a uniform quality of butter. They make more by guess than by actual test of the heat and cold of the cream when churning, and by the evenness of ripening. The cream should be kept at an even temperature when it is skimmed and put in the vessel to ripen for churning, then gradually raised to 62°. I find that is the best degree of warmth to procure the best quality and amount from the cream."

"Yes, with the exception of a few who are not as particular as they ought to be in regard to the cleanliness of their milk, etc."

"I have only been in this vicinity six months and from what I hear they don't make choice, first-class butter generally. I have not taken any pains to find what the causes are, but I know that

some lack cleanliness and keep the milk too long in the barn, as they milk first and then feed the cows, and let the milk stand behind the cows all this time; they churn too long; I always have noticed among the farmers in this vicinity that they would churn until all the butter was in one or two solid lumps, which hurts the grain and makes it more difficult to work in the salt; and you can not wash the butter thoroughly either; some wet their hands when they milk, and that gets a lot of filth into the milk, which can not be taken out, because the filth is in the liquid then."

"I think not, although there are exceptions."

"Through want of proper care of milk; poor places to keep cream and milk; not care enough taken of utensils."

"They do not; because this is a grain-raising district or locality, and dairies are small and too little attention is paid to making butter, all of which is consumed at home."

"They make good average butter but not first-class."

"They don't know how."

"They do not, simply because they don't take pains enough; first, because they don't take proper care of their cows; second, their stables are not well ventilated; third, in handling their milk and cream right after they get it. Some make a mistake by not churning when their milk is in proper shape, while others churn at the proper time but work their butter entirely too much. I have seen butter stirred and worked so much that it was a little better than grease."

"I think not; because they are not experienced butter-makers."

"Most of them make choice butter, but many don't make the finest article; because some of them don't know the right condition and some have not the facilities for keeping the milk and cream at the proper temperature, and a very few don't care much."

"I don't think they do. They have not the conveniences and don't take the pains that they should."

"I don't think they do; my opinion is that they don't take pains enough and don't go into details of butter-making. Some are not neat enough and don't take the best care of the milk. Some patrons don't bring good milk and are slovenly about taking care of the cans."

"They don't because they don't properly understand the art, and their facilities are not of the proper kind."

"No; I have not seen ten pounds of gilt-edge butter since I came to this county in 1875. There are no creameries in operation in this vicinity now, though some have been established but failed. Can't give any good reason for this unless it is because the climate, soil and grass are not adapted to butter-making. I formerly made cheese in Oneida county, came to this county in '75; found the milk so different in quality that I could not make first-class cheese until I tried ripening curd in sink and heating in vats or in whey to 105°, and have to vary them on occasions. Since then I have had no serious trouble. Don't think the milk is so rich in this part of the county as in Oneida county or the southern part, as our soil has a peculiar kind of wild grass which ripens very early and becomes woody. It is very uncommon to find butter or milk during the flush of the feed that will try by lactometer better than 95°. I don't think the milk strong enough to stand the curd-mill and get the best results."

"I think not; many have not suitable conveniences or appurtenances for making good butter and but few know how."

"No; because they don't take particular pains to keep their cows on good feed, and when they are stabled they are not overtidy in many ways."

"Yes, they have improved very much in the last decade. More butter is spoiled after making than is made poor. An economical, air-tight package is needed to keep butter during the heated season by those living far from the market."

"We have some who make good butter and some who make very poor. Those who do not make good butter are generally too shiftless to do anything good. Their cows are poorly kept and not properly cared for; they are a class who never read much and don't know the value of cleanliness about the barn and milk-room. In fact, they don't make any study in that direction; old-fashioned notions prevail to some extent, and they do as their fathers and mothers did from twenty to forty years ago. They don't take any agricultural paper and they don't know anything that is going on outside of their farm or neighborhood. They bring their butter to market and hear of some neighbor who has received full price for a good article of butter, and they will ask the same price and don't see why they can not get as much. It is all because the

butter is not made under proper supervision; the butter often being worked until there is no grain to it."

"I think not; because each one does just as his neighbor does."

"Some of them do; others do not. The cause is, perhaps, ignorance of the proper method of making and keeping; in some cases poor water. Some of them do not and can not afford to have the latest improved implements for making butter."

"They do."

"Two-thirds of the butter made in our town may be called sound. Only about one-third can be called fine; because every dairywoman thinks she makes the finest butter, and, of course, does not try to improve."

"They do not, because it is not a butter making section and they are not in practice."

"Some do and some do not. I think one trouble is, they do not observe proper care in the skimming and working. I think in some cases they do not get all the buttermilk out."

"No; because they do not know how and do not have proper facilities."

"They do not. They work too much on the old plan, instead of washing the milk out they work it out, leaving the butter salvy and streaky."

"Yes."

"A very few make strictly first-class butter. The reason is want of proper care in making and care of the utensils; letting the milk stand too long before skimming, and the cream stand too long without thoroughly mixing; churning and working butter too much, so as to spoil the grain."

"No. It does not compare with butter I have seen made in other sections, because they do not know how and because farmers here do not have the best rations for their cattle for winter. I believe the best butter can be made from cows that are fed in the barn proper rations. Our grass butter will not bring high prices, and has not in years past. I am now preparing to build a large barn with silo, expecting to feed largely in the stable rations suited to the production of the best milk for butter."

This gentleman also makes the following pledge:

"I, in the most solemn manner, pledge my brother dairymen that my cheese shall be full cream and the best my skill can make."

"I think not. Among the causes are, keeping the cows too poor to give rich milk; letting the milk stand too long before skimming; leaving the cream too long, after it is skimmed, before churning; churning after butter has come about the size of kernels of wheat without draining off the buttermilk and putting in cold water; uncleanness in many ways."

"In my opinion they do not. The trouble is in the care of the milk and cream. The milk is generally set in small pans without cooling. The cream is skimmed and mixed up to the time of churning, never being stirred, mixed or ripened. It is kept until the usual amount accumulates for the churning, regardless of the acidity or ripening. In warm weather the cream is often churned at too high a temperature, the butter coming soft and cheesy. One other trouble is in working the butter too much. It is generally salted and worked after churning and allowed to stand until the next churning and again worked, becoming very salvy before packing."

"They do not. Simply because they do not know how to care for their milk properly to procure the best cream. Do not have improved appurtenances. They lack judgment in both feeding their cattle and properly caring for the milk until the animal heat is out of it. This, in my judgment, is a critical period that the milk passes through, and unless it is properly ventilated by stirring in pure, clean air, it will take taint that can not help injuring the quality of the butter or cheese."

"They do not. There is not one in five who knows when to skim the cream or when to churn it, or who has a thermometer to tell how warm or how cool the cream is. Not one in ten has a place to keep the milk or cream in the right shape. They keep it in the kitchen or pantry, as a rule, where all the cooking has to be done and where there is smoking from tobacco as well as from the stove."

To the fourth interrogatory, viz.: "If you have any changes or modifications of the methods for manufacturing cheese which, in your opinion, would be an improvement upon that method, you will confer a favor if you will state what they are."

"No changes to make upon the methods of the committee on cheese-making."

"Cheese for home trade are better when heated to 104° and soured a little; and if milk is nearly sour, as it is in summer, it

should be heated to 110° , so as to cook as much as possible before developing too much acidity."

"There is one thing in the report on floating curds that I do a little different from your method, viz.: Not to let the curd lay in the whey until there is one-half inch acid on it. I find a great many times that the curd will float on top of the whey if it is allowed to stand until it will string one-half of an inch. Therefore I do not think you get as good a cheese from the curd after it floats as you do drawing the whey before. Curd has more gas where it floats and requires more acid, and when cured would be dryer and have a rougher surface than the cheese you draw the whey from before it floats. I think a small piece of salt-petre helps to make a cleaner flavor."

"I think in the first place cheese-makers do not take pains enough to instruct the patrons how to take care of the milk. It should be stirred and aired to get the animal heat out; then it should be cooled down to 60° Fahr., and the night's and morning's milk should be kept separate until it arrives at the factory. Then the milk should be heated to 86° Fahr., in the spring or fall, and enough rennet added to coagulate in thirty minutes, so you stop stirring it over the top with a dipper."

"I have no improvements to offer. I have been making cheese after Mr. G. A. Smith's method since about the second of last July, and have had a fine lot of cheese. They brought the highest market prices. I shall continue making after his method."

"The method is about the same as ours. We use about the same rennet and set at 97° or 98° to cool in the spring to 100° ; and in the fall, when the milk is rich in fat, as high as 105° . Our dealers demand a mellow cheese, and not a very moist one."

"The pamphlet covers the whole ground in floating curd. Patrons are to blame wholly for the floating curds, because they do not take care of the milk as they ought. They do not take out the animal heat. The great complaint about cheese being off flavor is caused by makers not salting sufficiently."

"I would draw the whey before any acid formed, especially in hot weather."

"The method given by the cheese inspectors is about the same as used by myself; except that I always heat the milk to 86° before adding the rennet. In this way we have to use less rennet

to coagulate the milk fit to cut in one hour. The less rennet used the slower the cheese will ripen and the longer they will keep and retain their flavor."

"I draw the whey as soon as I get a scald on. I think that the whey reacts on the curd and it does not make as fine-flavored cheese. My cheese has sold at the Little Falls market most of this season for a quarter of a cent a pound more than any other factory. I make for the home trade. I have had some tainted milk, in which case I use less rennet than when it is all right, and use sour whey with my rennet. If it is so bad as to cause a floater, I use good sharp vinegar — one pound to 1,000 pounds of milk. I find it works like a charm."

"I fully indorse the Cheddar process as practiced by your cheese inspector, W. W. Hall, of Gouverneur; he has made cheese in my factory the past season."

"I have not much change to make. I have found in my experience that the fine curd gives the best flavored cheese, and a more even texture. The vat should never be covered while the whey is on the curd, for it retains all of the gases. The curd should be well aired, before going to the press; that is, well stirred after the salt is added."

"My method is to set at 82°, cut with a perpendicular knife, placed one-quarter of an inch apart, the cross one and one-half inches apart, and never stop cutting until it is all done. Let it stand one-half hour; raise heat to 86° and let it stand one-half hour, then raise to 96° degrees. Do not draw off whey until ready to dip, which I determine with a hot iron."

"I differ a little from you. I use rennet enough to coagulate it, in thirty minutes. I heat to 96° in summer and 90° in autumn. I let my cheese set in the press twenty-four hours. Otherwise I agree with you."

"I do not know of any change in the mode laid down in the pamphlet. Milk hardly ever works two days alike, and one has to use his judgment in manufacturing it in its different stages."

"Would prefer to set in the summer at 86° and 88° in the fall, instead of 82° and 84°, as stated in your report, and use rennet enough to thicken in fifty minutes; for the reason that you have not got to use so much rennet, and your cheese will not come and go so much with the weather. I would also prefer to dip sweet,

before the curd has developed any acid whatever, but would give it about one-fourth of an inch in the fall. I would only grind once, as it has a tendency to make cheese dry. I have a mill that will grind fine enough so that it will salt even, and break it up the last time with my hand."

"My way of cooking a vat of curd is to apply heat gently, using two hours to scald to 100°. To do it in less time you jam the curd and cause a loss in whey. In summer I draw off the whey when the acid shows one-quarter of an inch. In cold weather (fall or spring) one-half an inch. When curd pulls in fine threads of one inch, pass it through the curd mill. Then let it stand to air and mature for one hour, when salt can be applied, two and a half to three pounds to every hundred pounds of curd. Grind again to mix the salt thoroughly. Put to press."

"I have adopted a part of your rules. I use the curd sink to pack my curd in, and just before dipping I heat my curd up two or three degrees. It helps to start off the whey, I think."

"I think the method given by the committee very good."

"In replying I will state my method of making cheese, beginning with May first. Heat the milk to 86°, use sufficient pure and sweet rennet to coagulate in from twenty to twenty-five minutes (that is, not longer than that; if it is one hour in coagulating considerable cream will go off in the whey), when it will split clear from the finger, cut it up, stir gently, using the rake, for about five minutes. Then apply steam, heating to 100°. Keep stirring until it will not pack, and, when the acid will draw out on the hot iron one and one-half inches, draw off the whey, then salt the curd, using two and one-half pounds of salt to 1,000 pounds of milk. In hot weather run cold water under the vat, while salting, to cool the curd down to about 85°. Then put to press."

"Different makers have different methods. Mine is as follows: In the summer I set milk at 86°, and intend to have it coagulate in about eighteen minutes, after which I let it stand nearly an hour, or long enough to have it break fully and smoothly; then I cut in the usual way, but rather fine, and cook 99° or 100°. I then keep it broken in that fine condition until it strings on the iron one-half inch; then I put it into my curd sink and let it pack. I cut it into chunks about eight inches. Every few minutes I turn it bottom side up until it is ready to grind. I never have any

trouble in getting a good article of cheese. I prefer a curd sink. It gives the curd a better chance to dispose of the whey than it does to make it in a vat. I have not had one rejection this year. Therefore, I claim my method a success."

"I think, as a general rule, the cheese-maker is in too much of a hurry to finish the day's work and get away from the factory."

"The method is all right."

"Have no modifications; believe the dairy conferences to be good."

"The method is in the main all right. We find it necessary, however, in this section, to scald curd to 104° or 106°, to enable us to extract the whey and get the required firmness. No general rule can be laid down for making cheese at all factories."

"I do not know as I have any better way of making cheese than that of Messrs. Smith, Hall and Morgan. I think if every cheese-maker would follow their method, they would have no trouble in making first-class cheese."

"I have carefully read the report of the cheese committee and comments thereon, and should highly recommend it for producing a firm, solid cheese. The only objection must be in the yield of curd. With us, we aim to produce a pound of cheese from nine and one-half pounds of milk, and I doubt if they can produce one pound of cheese from ten and one-half pounds of milk for the season, by the new process."

In answer to the fifth and sixth interrogatories, viz.: 5. "Is the cheese manufactured in your vicinity bringing, usually, the highest price in the market." 6. "If not, please state reasons."

"Some do and some do not. One sale of our factory went one-eighth of a cent a pound above anything in this State. The reasons are, those factories that make poor cheese do so through the neglect of the makers and patrons. Farmers in general do not take the care of their milk that they should. I think cheese-makers should go through an examination before entering a factory."

"No; owing to gassy milk, caused by marshy pasture and river water, and the makers not knowing how to handle it to obtain the best results. Many were bothered with what they term 'red spots.'"

"Yes, for the home trade, but not for shipping. The reasons are, poor milk, too much rennet and curd cooked too fast, and not properly agitated while cooking."

"Yes; for the last eight or ten years we have received from one-quarter to one-half a cent more for our cheese than they get at Utica or Little Falls, while in former years it was just the other way."

"No. First, because we have no established standard for milk. Second, because our patrons have advised a medium grade, between a shipping and a home trade. Third, we have used the skimmer quite a good deal, and consequently it is hard to hold a reputation, for we have to skim every time when butter raises a little higher than cheese. Some half and full skim factories have done better than full cream; but I think their prosperity is drawing to a close. It is hard to beat a man twice with skims."

"I know of no factory in Onondaga county that commands as good price for their cheese as factories do in the northern counties. The reasons are that the dairying sections of Onondaga county are mostly in low lands, swampy pastures, furnished with stagnant and impure water. Cows fed for milk on such feed can not be made to produce first-class milk, nor can such milk be made into first-class cheese."

"Not always. Because we don't have competition enough, and sometimes our cheese is too soft."

"Not as a general rule. I think it is on account of the quality of the cheese made. Every cheese-maker that I ever talked with admitted that he had trouble with poor milk. If the farmers would always bring pure sweet milk there would be better cheese."

"They do not. Because we have small factories and small dairies and do not have the best of makers."

"Most of it is. The reasons are that the small factories employ inexperienced cheese-makers. Patrons do not aerate or properly care for their milk."

"No; the reasons are too many small dairies, too many careless and shiftless dairymen who do not take proper care of their night's milk."

"No. Cause, improper care of milk."

"Usually up to the standard price, but only a few bring highest price. I think one of the reasons is proper care is not taken to deliver the milk at factories in proper condition."

"It is not. Nearly all the cheese is made at creameries, very little being full of cream. For two or three pounds of butter are

made from each one hundred pounds of milk, and the balance manufactured into cheese, which makes a very inferior article."

"No. Because they are mostly skim cheese."

Under the head "Remarks," the following suggestions, etc., have been made:

"In the first place farmers themselves should take proper care of the milk. I think much good could be done if the State Dairy Commissioner could send the inspectors around to inspect factories as often as once a month. It would keep them stirred upon the subject, as they would not know when to look for him, and consequently be on the lookout all the time."

"I wish every dairyman in the State of New York, and in the United States of America could have the pamphlet on butter and cheese-making put into his hands, with the rules for making which you sent, so that they might refer to them at any time." The following pledge is added: "I do solemnly promise never to make a cheese of skim milk, unless I brand it, 'skim cheese,' on the bandage."

"The State has enlisted in a good cause. There is lots of room for work, and if all your men do as well as Mr. Smith, the expert cheese-maker who called on me, I have no doubt but what the standard of cheese and butter will be raised to the benefit of all."

"I am heartily glad that this inquiry has been started, and I believe it will be attended with good results, as it is important to all that engage or are interested in cheese-making, that we make the best article possible. I shall look with interest for the outcome of this inquiry."

"Cheese-making has improved very much here since the conference of cheese-makers at Andover, N. Y., under the instruction of Messrs. Smith and Hall."

"I think it would be money well invested by the State, to send experts to prominent factories to teach them, as it seems wrong and unnecessary for Canadian and Australian cheese to outsell ours. I appreciate the work you are and have been doing for the dairy cause."

"I could not advise any change in the manufacture of cheese from the cheese committee's report. I have a suggestion to make in regard to milk that is turned or sourish, as is the case often in hot weather when milk is only delivered once a day. I have had

some experience with milk, in the past season, that has been sourish. In such cases, I usually double the amount of rennet and don't scald the curd over 90°. By so doing it counteracts the action of the nitrogenous ingredients of the milk and causes the cheese to ripen much faster than where less rennet is used. If I make a colored cheese, I use more annotto, as sour milk spores seem to have a destructive effect on the annotto. I have had no trouble in curing the cheese and have always received the highest price."

"I heartily agree with your committee. If all would heed the suggestions set forth in that little pamphlet, the greater part of the trouble would cease and the price would be better."

"I think the method advocated by Messrs. Smith, Hall and Morgan is the best."

"The paper which you sent me with rules for manufacturing butter and cheese is full of very valuable advice to dairymen. These rules should be in the hands of every dairy and cheese-maker in the United States. It would be very desirable to have them in book form. It should be in every farmer's library."

"When a farmer keeps his milk over night he would find it to his advantage to set his milk-can on the clean ground. The temperature of milk in the vat should not be allowed to raise too high, even though cooled before rennet is added. Curd left over from the day before may be added after the vat is scalded. Sour milk is better to produce acid than sour whey. Cheese may be made too close by pouring on hot water while pressing. It is a good idea to leave the cap cloths on the cheese until a few days before shipping; then grease well with hot grease. The more rapid it is desired to cure cheese the warmer the curing-room should be—not below 45° nor above 75°."

"If our farmers would feed their cows and make their butter as suggested in your report, they would have no poor butter. Please send me a few of your committee reports. I have lost or mislaid the one you sent me."

"I think that there should be more cheese inspectors, and if at the farmers conventions a half day could be given to the discussion of cheese-making it would be very beneficial."

"The most we have to contend with in manufacturing cheese is the inequality of different farmers' milk. We now have instru-

ments that would detect water and the use of the skimmer, but what we need most is to determine the relative value of pure milk from some uniform basis. We could then proceed to regulate the trouble, which now rests with the farmers in feeding their stock and caring for the milk."

"I think cheese should be labeled for just what it is, and not put cheese on the market as a good article when it is not."

"In regard to manufacture of home-trade cheese I would heat to 98° or 100°, then draw one-half inch acid on a dry curd and salt two and one-fourth pounds to every 100 pounds of milk and keep the temperature in the curing-room from 70° to 75° for two weeks. In extreme cases of tainted milk or curd I would advise drawing four and one-half inch acid on a dry curd. I have followed this practice for twenty years with good success. In this process, of course, it requires more time than though less acid had been drawn."

"The only remarks I shall make are in regard to branding skim cheese. I claim that manufacturers of full cream should have protection against half-stock goods. Skim cheese should be branded as well as full cream. I see no reason for using the State brand until they use a State skim brand."

"It is my opinion that floating curds are caused by carelessness of the cheese maker nine times out of ten. Now, the cheese maker that made here where I am making at present, had forty-two days floating curds in succession last year, caused, I think, by using tainted rennet. I have not had a floater this season. My idea is to use nothing but pure, sweet rennet, work the curds fast to retain the moisture in the cheese, and keep everything about the factory sweet and clean."

"I am not manufacturing American cheese or butter. Am retailing a great deal of butter and find that at the least one-third of the farmers through the country are making an inferior article which in reality is not worth within three to five cents what butter would bring if they took more pains and understood the business. It would pay the butter-making community well if in each county they had some sort of a school established where they could go and get instruction."

"In the first place, we have too many small factories near each other. They divide up the patrons. There should be some test

or examination that a maker should go through to show that he is competent to make cheese and have charge of a factory."

"Think more cheese could be sold at the factories to patrons and home dealers if factorymen would try, and thus make the shipments to New York less and prices better."

"At our fair, held here at Wellsville, we gave a premium of fifty dollars and twenty-five dollars on butter in fifty pound tubs. There were about twenty tubs, of which only one was perfect. They were all what would be called No. 1. Also, premium on cheese, fifty dollars and twenty-five, of which there were just twenty different cheeses. Not one stood a perfect test, but they were all from No. 1 factories. I can offer no suggestions except that it takes practice with a good amount of study to make good butter."

"I have read the reports of the dairy and cheese committee and am much pleased with it. I am a butter and cheese maker."

"I make home trade cheese mostly, in this factory; that is what we call soft cheese. I have learned by experience the process to manufacture cheese from milk that is tainted with leaks, so that the cheese will bear the test. Allegany county is noted for leaks. We have quite a large quantity in the spring. The cheese, when cured, can not be told from those which did not have any leaks in. We make shipping cheese nearly the same as your circular tells."

"The first necessity to success is good cows. These may be found in all breeds, likewise poor ones may also be found there. As far as my experience goes, the only true test as to a cow's qualities, at least for a dairy cow, lies in the churn. Each cow should be tested separately, and, if it is properly done, the butter will tell you just what kind of a cow you have."

"The Columbia County Creamery, located at Chatham, N. Y., started its operations about October 1, 1887, on the coöperative plan, using the Cooley system. Farmers here use grade Jersey cows to a good degree in most instances. They give good care and have been cleanly in their stables and in their general management, and have aimed to produce milk of the best quality, that the butter made from it might be the best in every point. We have received from patrons 353,057 spaces of cream, from which 58,739 pounds of butter were made, which sold for \$14,103.11. Patrons received for their cream \$10,312.17. It has been the policy of the company to employ a skilled and expert butter-maker who has a thorough knowledge of cream and its manipula-

tion. The wisdom of this policy is shown in the fact that the creamery has never turned out a poor lot of butter and has gained a high reputation in one year, and more orders than it can fill. Our patrons have learned the importance of cooling down their milk quickly, aiming at 45° as near as possible; also feeding grain to secure a larger yield of milk of the best quality. One important factor in a public creamery is a large patronage, in order that the expenses may be reduced to the lowest point. There is no question but that, by a wise selection of cows and good breeding, with liberal feeding, producing only the best butter, the profit in dairying can be largely increased."

The special report of R. W. Moore, Ph. B.,* appearing as one of the appendices, including a resumé of the scientific portions of preceding reports and the latest knowledge up to date of the chemistry, etc., of dairy products, was written because the scientific matter was scattered through the several preceding reports which are exhausted, and it is essential to facilitate our work to furnish this knowledge to new chemists frequently employed throughout the State.

The result of the work of the department during the last year has been exceedingly satisfactory to me, and that it has been appreciated by those most deeply interested is evidenced by the fact that consumers and dairymen themselves have generally commended our work and the common sentiment is that the work should be so extended that the benefits may be enjoyed by all.

The following appendices are submitted as a part of this report, viz.: Report of R. D. Clark, chemist of the department at Albany; report of B. F. Van Valkenburgh, assistant dairy commissioner in charge of second division; report of F. D. Tuthill, assistant dairy commissioner in charge of third division, and the joint report of Assistant Commissioners M. A. Perry and P. J. Sutley, in charge of the fifth and sixth divisions; report of Expert W. G. Spence, of Oneida, of work performed under the direction of the commissioner; reports of W. W. Hall, G. A. Smith and M. T. Morgan, instructors in the art of cheese-making.

Also, a special report by R. W. Moore, Ph. B., and the laws of the State of New York, relative to dairy products.

*The manuscript was lost, and we have not been able to procure another copy in time for this report.

DETAILED STATEMENT

Of the assistant commissioners, experts, agents, chemists and counsel employed and appointed during the past year, together with their compensation, expenses and disbursements for the fiscal year ending September 30, 1888.

FINANCIAL STATEMENT FOR FISCAL YEAR ENDING SEPTEMBER 30, 1888.

Date.	NAME.	Position held.	Compensation.	Expenses.
1887.				
October 1.....	Expert and agent.....	\$75 00	.....
October 6.....	Expert and agent.....	80 00	900 00
October 6.....	gh.....	Assistant commissioner.....	208 38	73 86
October 6.....	Expert and agent.....	80 00	82 35
October 6.....	Expert and agent.....	80 00	66 40
October 6.....	Expert and agent.....	80 00	90 79
October 6.....	Expert and agent.....	105 00	128 20
October 6.....	Expert and agent.....	80 00	71 71
October 6.....	Expert and agent.....	80 00	53 76
October 6.....	Expert and agent.....	80 00	123 85
October 6.....	Expert and agent.....	100 00	88 59
October 6.....	Laborer.....	20 00	.....
October 11.....	Expert and agent.....	60 00	39 50
October 11.....	Expert and agent.....	78 00	80 10
October 11.....	Expert and agent.....	90 00	90 19
October 11.....	Expert and agent.....	80 00	119 39
October 11.....	Attorneys.....	335 00	112 42
October 11.....	Chemist.....	16 00	50
October 11.....	Attorney.....	135 00	4 42
October 11.....	Chemist.....	100 00	6 31
October 21.....	Assistant commissioner.....	166 66	131 21
October 22.....	Expert and agent.....	34 50	1 30
October 23.....	Expert and agent.....	75 00	3 65
October 23.....	Chemist.....	100 00	.....
October 25.....	Agent.....	323 75	86 95
October 25.....	Expert and agent.....	75 00	4 14
October 25.....	Expert and agent.....	75 00	19 96
October 25.....	Expert and agent.....	86 00	29 44
October 25.....	Expert and agent.....	90 00	9 26
October 27.....	Agent.....	.....	26 35
October 27.....	Assistant commissioner.....	150 00	45 68
October 27.....	Attorney.....	135 00	7 02
October 27.....	Attorney.....	70 00	8 74
October 27.....	Agent.....	19 00	2 60

October 27	Edward W. Martin	Chemist	137 36	.....	.....
October 27	Thomas Byrnes	Agent and expert	245 00	.....	225 35
October 28		Chemist	76 00	.....	5 03
October 28		Commissioner	250 00	.....	.....
October 28		Assistant commissioner	166 06	.....	.....
October 28		Expert and agent	100 00	.....	.....
October 28		Chemist	166 06	.....	.....
October 28		Expert and agent	76 00	.....	13 91
October 31		Laborer	20 00	.....	.....
November 3		Expert and agent	60 00	.....	56 45
November 3		Chemist	100 00	.....	15 39
November 3		Expert and agent	106 00	.....	43 64
November 3		Expert and agent	80 00	.....	86 90
November 3		Expert and agent	80 00	.....	83 76
November 3		Expert and agent	80 00	.....	88 35
November 3		Expert and agent	80 00	.....	75 08
November 3		Stenographers	36 10	.....	1 05
November 3		Expert and agent	80 00	.....	81 30
November 5		Expert and agent	80 00	.....	78 60
November 5		Expert and agent	100 00	.....	28 40
November 5		Expert and agent	80 00	.....	78 60
November 5		Expert and agent	80 00	.....	77 04
November 5		Expert and agent	80 00	.....	85 90
November 5		Expert and agent	72 00	.....	46 06
November 5		Expert and agent	51 00	.....	87 43
November 10		Attorney	116 00	.....	.....
November 10		Attorney	126 00	.....	2 61
November 10		Expert and agent	78 00	.....	67 26
November 10		Expert and agent	186 00	.....	2 75
November 14		Chemists	243 00	.....	1 50
November 14		Chemist	174 50	.....	76
November 14		Chemist	153 00	.....	50
November 14		Assistant commissioner	208 39	.....	265 44
November 17		Expert	54 00	.....	46 70
November 23		Chemist	70 00	.....	14 64
November 23		Chemist	66 06	.....	8 90
November 26		Assistant commissioner	180 00	.....	47 19
November 29		Expert	80 00	.....	20 05
November 29		Expert	63 00	.....	50 43
November 29		Expert	56 60	.....	1 70
November 29		Expert	75 00	.....	2 50
November 29		Expert	24 00	.....	7 26
November 29		Attorneys	150 00	.....	9 52
November 29		Attorney	15 00	.....	.....
November 29		Expert	30 00	.....	16 48
November 29	Charles A. Perry	Expert	76 00	.....	4 41
November 29	M. A. Perry	Assistant Commissioner	166 67	.....	145 39
November 29	S. A. Lattimore	Chemist	100 00	.....	.....
November 29	Michael Galligan	Expert	76 00	.....	5 17
November 29	Wilfred H. Sage	Chemist	92 00	.....	30 73

DETAILED STATEMENT—(Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1887.				
December 1.....	Simon Nusbaum.....	Expert.....	\$76 00	\$10 06
December 1.....	J. K. Brown.....	Dairy commissioner.....	250 00	.....
December 1.....	Geo. L. Fianders.....	Assistant commissioner.....	166 66	.....
December 1.....	R. D. Clark.....	Chemist.....	186 66	.....
December 1.....	Geo. B. Fellows.....	Expert and agent.....	100 00	.....
December 8.....	John M. Laundry.....	Laborer.....	20 00	.....
December 6.....	Baker & Roebuck.....	Stenographers.....	32 50	.....
December 6.....	Arch. D. Clark.....	Expert and agent.....	80 00	80 70
December 6.....	T. C. Du Bois.....	Expert and agent.....	80 00	49 62
December 6.....	J. R. Wheeler.....	Expert and agent.....	80 00	87 40
December 6.....	W. W. Meeteer.....	Expert and agent.....	80 00	75 59
December 6.....	T. R. Gray.....	Expert and agent.....	80 00	47 10
December 6.....	.....	Expert and agent.....	105 00	42 37
December 6.....	.....	Assistant commissioner.....	208 33	121 09
December 6.....	.....	Chemist.....	100 00	16 98
December 9.....	.....	Chemist.....	35 00	.....
December 9.....	.....	Expert and agent.....	80 00	46 26
December 9.....	.....	Expert and agent.....	80 00	46 62
December 9.....	.....	Assistant commissioner.....	100 00	32 15
December 9.....	.....	Expert and agent.....	80 00	17 75
December 9.....	.....	Assistant commissioner.....	150 00	37 64
December 9.....	.....	Expert and agent.....	21 00	33
December 9.....	.....	Expert and agent.....	80 00	81 51
December 16.....	.....	Assistant commissioner.....	166 67	134 22
December 17.....	.....	Chemist.....	51 24	.....
December 17.....	.....	Expert and agent.....	39 00	1 40
December 17.....	.....	Expert and agent.....	75 00	4 43
December 17.....	.....	Expert and agent.....	80 00	6 43
December 17.....	.....	Expert and agent.....	75 00	8 41
December 17.....	.....	Expert and agent.....	75 00	4 47
December 17.....	.....	Attorney.....	400 00	.....
December 17.....	.....	Attorney.....	170 00	.....
December 17.....	.....	Attorney.....	150 00	1 50
December 17.....	.....	Attorney.....	475 00	.....
December 17.....	.....	Expert and agent.....	575 00	137 96
December 21.....	.....	Chemist.....	100 00	16 66
December 21.....	.....	Chemist.....	204 25	.....
December 21.....	.....	Chemist.....	148 47	.....
December 21.....	.....	Chemist.....	21 50	.....
December 21.....	.....	Chemist.....	85 00	.....

December 21	Expert	45 00	20 54
December 22	Chemist	175 00	
December 23	Assistant commissioner	100 00	
December 24	Expert and agent	100 00	
December 25	Expert	100 00	
December 26	Commissioner	250 00	
December 27	Expert	24 00	
December 28	Expert and agent	51 00	26 89
December 29	Expert and agent	68 00	3 35
December 30	Expert and agent	30 00	
December 31	Chemist	50 00	
December 32	Laborer	26 00	
December 33	Expert and agent	75 00	70 60
December 34	Expert and agent	75 00	13 60
December 35	Expert and agent	75 00	11 56
January 1	Expert and agent	80 00	71 00
January 2	Expert and agent	80 00	70 95
January 3	Expert and agent	80 00	106 24
January 4	Expert and agent	80 00	79 80
January 5	Expert and agent	105 00	59 08
January 6	Expert and agent	80 00	73 80
January 7	Expert and agent	80 00	59 54
January 8	Expert and agent	80 00	18 00
January 9	Expert and agent	80 00	30 24
January 10	Expert and agent	80 00	63 53
January 11	Chemist	125 00	13 33
January 12	Attorney	100 00	
January 13	Expert and agent	80 00	57 23
January 14	Assistant commissioner	100 00	60 85
January 15	Chemist	225 50	
January 16	Chemist	176 24	1 75
January 17	Assistant commissioner	208 33	343 31
January 18	Stenographers	28 00	2 39
January 19	Attorney	410 00	
January 20	Attorney	215 00	
January 21	Attorney	270 00	
January 22	Chemist	457 78	
January 23	Attorney	200 00	17 71
January 24	Expert	10 50	15 20
January 25	Expert and agent	75 00	7 06
January 26	Assistant commissioner	150 00	14 64
January 27	Expert and agent	75 00	36 74
January 28	Expert and agent	45 50	14 64
January 29	Expert and agent	80 00	1 20
January 30	Expert and agent	75 00	13 71
January 31	Expert and agent	75 00	10 49
January 32	Attorney	140 00	7 40
January 33	Chemist	109 00	1 60

DETAILED STATEMENT — (Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1899.				
January 20	Expert and agent.....	\$100 00	\$14 32
January 20	Assistant commissioner.....	166 00	120 79
February 1	Commissioner.....	250 00	.....
February 1	Assistant commissioner.....	166 00	.....
February 1	Chemist.....	166 00	.....
February 1	Expert and agent.....	100 00	.....
February 2	Expert and agent.....	75 00	10 80
February 3	Chemist.....	.....	30 67
February 3	Chemist.....	75 00	31 50
February 3	Laborer.....	.....	29 00
February 3	Expert and agent.....	15 00	12 00
February 3	Chemist.....	21 00	17 88
February 3	Expert and agent.....	33 00	14 89
February 3	Attorneys.....	260 00	78 96
February 3	Chemist.....	100 00	.....
February 3	Expert and agent.....	100 00	.....
February 3	Chemist.....	97 50	.....
February 3	Chemist.....	56 25	.....
February 3	Chemist.....	174 00	.....
February 3	Expert and agent.....	80 00	52 55
February 3	Assistant commissioner.....	100 00	27 61
February 3	Attorney.....	280 00	.....
February 3	Attorney.....	275 00	1 75
February 3	Attorney.....	205 00	.....
February 3	Chemists.....	61 26	.....
February 3	Chemist.....	119 78	.....
February 3	Stenographers.....	36 00	1 10
February 3	Expert and agent.....	80 00	70 04
February 3	Chemist.....	125 00	11 69
February 3	Expert and agent.....	30 00	36 84
February 3	Expert and agent.....	80 00	54 40
February 3	Expert and agent.....	80 00	51 84
February 3	Expert and agent.....	80 00	83 81
February 3	Expert and agent.....	80 00	72 24
February 3	Expert and agent.....	80 00	114 74
February 3	Assistant commissioner.....	208 28	.....
February 3	Expert and agent.....	105 00	48 62
February 3	Expert and agent.....	80 00	84 10
February 3	Attorney.....	200 00	.....
February 3	Expert and agent.....	68 00	1 45
February 3	Chemist.....	100 00	.....
February 3	Expert and agent.....	75 00	5 60

February 13.....	George H. Palmer.....	Expert and agent.....	36 00	7 49
February 13.....	.....	Assistant commissioner.....	166 67	84 34
February 15.....	.....	Expert and agent.....	75 00	3 92
February 18.....	.....	Expert and agent.....	75 00	1 70
February 20.....	.....	Expert and agent.....	46 00	31 24
February 23.....	.....	Expert and agent.....	18 00	3 55
February 26.....	.....	Expert and agent.....	75 00	4 30
February 28.....	.....	Expert and agent.....	63 00	25 75
February 28.....	.....	Expert and agent.....	30 00	15 45
February 28.....	.....	Expert and agent.....	150 00	35 28
February 29.....	.....	Chemist.....	90 00	.....
March 1.....	.....	Commissioner.....	250 00	.....
March 1.....	.....	Assistant commissioner.....	166 66	.....
March 1.....	.....	Chemist.....	100 00	.....
March 1.....	.....	Expert and agent.....	75 00	17 25
March 1.....	.....	Expert and agent.....	43 00	19 70
March 1.....	.....	Expert and agent.....	100 00	25 51
March 2.....	.....	Expert and agent.....	20 00	.....
March 3.....	.....	Laborer.....	50 00	76 12
March 6.....	.....	Expert and agent.....	80 00	83 25
March 6.....	.....	Expert and agent.....	80 00	67 75
March 6.....	.....	Expert and agent.....	80 00	83 55
March 6.....	.....	Expert and agent.....	105 00	70 94
March 6.....	.....	Expert and agent.....	125 00	12 31
March 7.....	.....	Chemist.....	80 00	41 84
March 7.....	.....	Expert and agent.....	80 00	83 25
March 7.....	.....	Expert and agent.....	80 00	65 50
March 7.....	.....	Expert and agent.....	100 00	31 70
March 7.....	.....	Assistant commissioner.....	205 33	127 29
March 10.....	.....	Attorney.....	65 00	.....
March 13.....	.....	Assistant commissioner.....	45 00	22
March 13.....	.....	Assistant commissioner.....	150 00	29 03
March 13.....	.....	Expert and agent.....	75 00	1 13
March 13.....	.....	Chemist.....	100 00	.....
March 13.....	.....	Expert and agent.....	67 50	1 00
March 13.....	.....	Expert and agent.....	75 00	3 14
March 13.....	.....	Expert and agent.....	75 00	5 25
March 13.....	.....	Expert and agent.....	60 00	4 60
March 13.....	.....	Expert and agent.....	80 00	33 11
March 13.....	.....	Expert and agent.....	50 00	17 73
March 15.....	.....	Expert and agent.....	18 00	17 15
March 20.....	.....	Expert and agent.....	80 00	17 25
March 20.....	.....	Chemists.....	.....	39 98
March 21.....	.....	Attorney.....	40 00	.....
March 22.....	.....	Assistant commissioner.....	166 67	162 31
March 22.....	.....	Agent.....	200 00	23 71
March 22.....	.....	Agent.....	21 00	.....
March 22.....	.....	Expert and agent.....	75 00	30

DETAILED STATEMENT — (Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1886.				
March 22.....	Expert and agent.....	.....	\$50 00	.....
March 29.....	Attorney.....	.....	100 00	.....
March 29.....	Chemist.....	.....	90 00	.....
March 30.....	Expert.....	.....	90 00	945 33
March 30.....	Expert and agent.....	.....	75 00	25 50
March 30.....	Commissioner.....	.....	260 00	.....
April 2.....	Assistant commissioner.....	.....	165 00	.....
April 2.....	Chemist.....	.....	165 00	.....
April 2.....	Expert and agent.....	.....	100 00	.....
April 2.....	Assistant commissioner.....	.....	100 00	.....
April 2.....	Chemist.....	.....	100 00	29 45
April 2.....	Expert and agent.....	.....	100 00	5 52
April 2.....	Assistant commissioner.....	.....	150 00	20 40
April 2.....	Assistant commissioner.....	.....	150 00	28 40
April 2.....	Laborer.....	.....	20 00	.....
April 2.....	Expert and agent.....	.....	90 00	11 06
April 2.....	Expert and agent.....	.....	75 00	3 20
April 2.....	Expert and agent.....	.....	65 00	1 09
April 2.....	Expert and agent.....	.....	75 00	6 06
April 2.....	Expert and agent.....	.....	75 00	3 50
April 2.....	Assistant commissioner.....	.....	165 00	112 47
April 2.....	Assistant commissioner.....	.....	208 33	149 26
April 2.....	Expert and agent.....	.....	105 00	61 77
April 2.....	Expert and agent.....	.....	80 00	57 97
April 2.....	Expert and agent.....	.....	80 00	41 15
April 2.....	Expert and agent.....	.....	80 00	62 33
April 2.....	Expert and agent.....	.....	80 00	74 23
April 2.....	Expert and agent.....	.....	80 00	65 95
April 2.....	Expert and agent.....	.....	80 00	108 02
April 2.....	Expert and agent.....	.....	80 00	83 94
April 2.....	Expert and agent.....	.....	80 00	95 53
April 2.....	Stenographers.....	.....	24 70	3 23
April 2.....	Expert and agent.....	.....	42 00	43 97
April 2.....	Chemist.....	.....	125 00	29 03
April 2.....	Chemist.....	.....	19 37	.....
April 2.....	Expert and agent.....	.....	40 25	.....
April 2.....	Expert and agent.....	.....	24 00	13 00
April 2.....	Attorney.....	.....	110 00	4 50
April 2.....	Attorney.....	.....	40 00	7 23
April 2.....	Attorney.....	.....	30 00	.....
April 2.....	Attorney.....	.....	30 00	.....
April 2.....	Attorney.....	.....	150 00	.....

April	21	C. E. Davenport	Stenographer	48 30	\$ 40
April	21	Thomas B. Loughlin	Expert and agent	16 00	9 67
April	21	John Wiley	Expert and agent	78 00	9 85
April	21	H. W. White	Expert and agent	24 00	12 61
April	24	George L. Flanders	Assistant commissioner	.....	9 85
April	26		.....	48 00	14 71
April	26		Agent	100 00	28 00
April	27		Assistant commissioner	160 00	.....
May	1		Commissioner	250 00	.....
May	1		Chemist	166 66	.....
May	1		Expert and agent	100 00	.....
May	2		.....	75 00	26 50
May	2		Assistant commissioner	160 00	26 16
May	2		Expert and agent	80 00	22 00
May	7		Attorney	26 00	.....
May	7		.....	65 00	.....
May	7		Chemist	136 26	1 98
May	7		Chemist	65 00	20 40
May	7		Chemist	125 00	20 57
May	7		Expert and agent	100 00	48 10
May	7		Expert and agent	80 00	86 28
May	7		Expert and agent	80 00	53 60
May	7		Expert and agent	80 00	45 65
May	7		Expert and agent	80 00	48 18
May	7		Expert and agent	80 00	81 20
May	7		Expert and agent	80 00	48 61
May	7		Expert and agent	106 00	75 81
May	7		Expert and agent	80 00	73 55
May	7		Chemist	27 50	.....
May	8		Laborer	8 00	.....
May	8		Expert and agent	45 00	25 99
May	10		Chemist	190 00	.....
May	10		Laborer	10 00	.....
May	10		Assistant commissioner	166 67	130 61
May	16		Expert and agent	80 00	25 76
May	16		Expert and agent	76 00	5 25
May	10		Expert and agent	75 00	5 96
May	10		Expert and agent	75 00	4 00
May	14		Attorney	90 00	.....
May	14		Attorney	60 00	.....
May	14		Expert and agent	76 00	2 49
May	14		Expert and agent	64 00	1 75
May	14		Expert and agent	18 00	9 06
May	14		Agent	100 00	22 02
May	14		Expert and agent	89 00	24 10
May	14		Expert and agent	37 50	3 75
May	14		Expert and agent	12 00	6 10
May	14		Assistant commissioner	100 00	35 82
May	14		Assistant commissioner	208 33	78 48
May	14		Commissioner	250 00	.....
June	1		.....	.....	.....

DETAILED STATEMENT — (Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
June 1.....	Assistant commissioner.....	Assistant commissioner.....	\$166 66	.....
June 1.....	Chemist.....	Chemist.....	166 66	.....
June 1.....	Expert and agent.....	Expert and agent.....	100 00	.....
June 2.....	Expert and agent.....	Expert and agent.....	75 00	.....
June 2.....	Expert and agent.....	Expert and agent.....	100 00	.....
June 3.....	Expert and agent.....	Expert and agent.....	20 00	.....
June 5.....	Chemist.....	Chemist.....	166 67	.....
June 5.....	Assistant commissioner.....	Assistant commissioner.....	75 00	.....
June 5.....	Expert and agent.....	Expert and agent.....	8 00	.....
June 5.....	Expert and agent.....	Expert and agent.....	25 00	.....
June 5.....	Expert and agent.....	Expert and agent.....	48 00	.....
June 6.....	Expert.....	Expert.....	47 11	.....
June 6.....	Expert and agent.....	Expert and agent.....	25 81	.....
June 6.....	Expert and agent.....	Expert and agent.....	5 50	.....
June 6.....	Expert and agent.....	Expert and agent.....	75 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	75 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	75 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	100 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	208 98	.....
June 6.....	Expert and agent.....	Expert and agent.....	80 00	.....
June 6.....	Attorney.....	Attorney.....	106 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	43 80	.....
June 6.....	Expert and agent.....	Expert and agent.....	63 19	.....
June 6.....	Expert and agent.....	Expert and agent.....	60 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	62 15	.....
June 6.....	Expert and agent.....	Expert and agent.....	60 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	60 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	61 08	.....
June 6.....	Expert and agent.....	Expert and agent.....	72 07	.....
June 6.....	Expert and agent.....	Expert and agent.....	77 87	.....
June 6.....	Attorney.....	Attorney.....	106 00	.....
June 6.....	Attorney.....	Attorney.....	90 00	.....
June 6.....	Assistant commissioner.....	Assistant commissioner.....	180 00	.....
June 6.....	Assistant commissioner.....	Assistant commissioner.....	100 00	.....
June 6.....	Chemist.....	Chemist.....	20 00	.....
June 6.....	Expert and agent.....	Expert and agent.....	66 00	.....
June 6.....	Attorney.....	Attorney.....	60 00	.....
June 7.....	Expert and agent.....	Expert and agent.....	81 00	.....
June 7.....	Chemist.....	Chemist.....	.....	.....
June 7.....	Laborer.....	Laborer.....	20 00	.....
June 7.....	Chemist.....	Chemist.....	125 00	.....
June 7.....	Chemist.....	Chemist.....	8 75	.....
June 9.....	Chemist.....	Chemist.....	125 00	.....
June 9.....	Chemist.....	Chemist.....	15 00	.....
June 12.....	Expert and agent.....	Expert and agent.....	80 00	.....
June 12.....	Expert and agent.....	Expert and agent.....	80 00	.....

June	20	P. D. Niver	Attorney	25 00	.....
June	20	.....	Chemist	100 00	.....
June	30	.....	Expert and agent	75 00	4 00
June	30	.....	Expert and agent	75 00	6 45
June	22	.....	Expert and agent	80 00	97 49
June	22	.....	Expert and agent	25 00	3 35
June	28	.....	.....	25 25	.....
June	30	.....	Expert and agent	75 00	17 49
July	2	.....	Commissioner	250 00	.....
July	2	.....	Assistant commissioner	155 05	4 30
July	2	.....	Chemist	155 05	.....
July	2	.....	Expert and agent	100 00	.....
July	3	.....	Laborer	20 00	.....
July	3	.....	Assistant commissioner	150 00	40 51
July	6	.....	Expert and agent	100 00	59 08
July	6	.....	Expert and agent	80 00	73 53
July	6	.....	Expert and agent	80 00	50 76
July	6	.....	Expert and agent	80 00	77 08
July	6	.....	Expert and agent	105 00	68 10
July	6	.....	Chemist	125 00	21 07
July	6	.....	Stenographer	52 63	5 00
July	6	.....	Assistant commissioner	208 83	76 99
July	6	.....	Stenographer	35 00	4 45
July	6	.....	Attorney	300 00	9 50
July	6	.....	Attorney	140 00	3 85
July	6	.....	Chemist	7 60	.....
July	6	.....	Chemist	18 75	.....
July	7	.....	Chemist	.....	6 10
July	7	.....	Expert and agent	80 00	55 13
July	7	.....	Expert and agent	80 00	91 05
July	7	.....	Assistant commissioner	100 00	84 80
July	7	.....	Expert and agent	80 00	70 79
July	7	.....	Expert and agent	73 00	21 05
July	7	.....	Expert and agent	80 00	73 13
July	7	.....	Attorney	20 00	.....
July	10	.....	Assistant commissioner	155 65	99 05
July	10	.....	Expert and agent	80 00	7 72
July	10	.....	Expert and agent	75 00	2 80
July	10	.....	Expert and agent	75 00	5 50
July	10	.....	Expert and agent	69 00	90
July	10	.....	Expert and agent	80 00	65 49
July	12	.....	Chemist	100 00	.....
July	12	.....	Expert and agent	75 00	11 35
July	12	.....	Expert and agent	48 00	30 45
July	12	.....	Expert and agent	97 00	19 74
July	12	.....	Expert and agent	100 00	5 74
July	12	.....	Agent	80 00	23 20
July	14	.....	Expert and agent	88 49	.....
July	17	.....	Chemist	100 00	.....
July	20	.....	Chemist	.....	.....
July	20	.....	Expert and agent	75 00	19 10

DETAILED STATEMENT—(Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1898.				
July 20.....	D.....	Expert and agent.....	\$24 00	\$10 60
July 20.....	.....	Expert and agent.....	76 00	90
July 21.....	.....	Expert and agent.....	78 00	66 06
July 29.....	.....	Commissioner.....	250 00	.....
July 31.....	.....	Expert and agent.....	75 00	84 14
August 1.....	.....	Assistant commissioner.....	168 66	.....
August 1.....	.....	Chemist.....	168 66	.....
August 1.....	.....	Expert and agent.....	100 00	.....
August 2.....	.....	Expert and agent.....	100 00	67 03
August 8.....	.....	Attorney.....	90 00	25
August 8.....	.....	Expert and agent.....	100 00	70 57
August 8.....	.....	Expert and agent.....	100 00	34 45
August 8.....	.....	Laborer.....	20 00	.....
August 8.....	.....	Chemist.....	.....	64 54
August 8.....	F. D. Curtiss.....	Expert.....	48 00	45 10
August 8.....	James W. Walsh.....	Expert and agent.....	60 00	62 64
August 8.....	Theodore Deeske.....	Chemist.....	10 00	.....
August 8.....	John Gardiner.....	Expert and agent.....	76 00	87 16
August 9.....	Charles S. Kellogg.....	Expert and agent.....	45 00	41 48
August 9.....	F. D. Tutbill.....	Assistant commissioner.....	100 00	48 43
August 9.....	E. S. Wilson.....	Expert and agent.....	100 00	58 65
August 9.....	W. W. Meeteer.....	Expert and agent.....	100 00	39 26
August 9.....	J. J. Sorenson.....	Expert and agent.....	100 00	77 20
August 9.....	.....	Assistant commissioner.....	208 33	154 83
August 9.....	.....	Expert and agent.....	80 00	45 91
August 9.....	.....	Expert and agent.....	76 00	38 41
August 9.....	.....	Expert and agent.....	78 00	68 26
August 9.....	.....	Chemist.....	92 69	5 19
August 9.....	.....	Expert and agent.....	80 00	50 32
August 9.....	.....	Assistant commissioner.....	180 00	98 67
August 9.....	.....	Expert and agent.....	78 00	45 08
August 9.....	.....	Expert and agent.....	100 00	73 83
August 9.....	.....	Expert and agent.....	80 00	57 79
August 9.....	.....	Expert and agent.....	100 00	30 31
August 9.....	.....	Expert and agent.....	76 00	9 15
August 22.....	.....	Chemist.....	110 00	.....
August 22.....	D.....	Expert and agent.....	50 00	67 06
August 22.....	.....	Expert and agent.....	76 00	30 87
August 22.....	.....	Expert and agent.....	76 00	26 36
August 22.....	.....	Expert and agent.....	52 50	55 30
August 23.....	.....	Expert and agent.....	76 00	77 46

August 25.....	George B. Fellows.....	Expert and agent.....	100 00	.....	1 66
August 30.....	Leander W. Cooley.....	Expert and agent.....	66 00	.....	13 46
August 30.....	Jeremiah Clark.....	Expert and agent.....	76 00	.....	.....
August 30.....	Sullivan & Gladding.....	Chemists.....	15 00	.....	26
August 30.....	.....	Chemist.....	16 00	.....	.....
August 30.....	.....	Chemist.....	54 67	.....	.....
August 31.....	.....	Chemist.....	10 00	.....	.....
August 31.....	.....	Assistant commissioner.....	166 67	.....	132 66
August 31.....	.....	Agent.....	100 00	.....	10 94
August 31.....	.....	Expert and agent.....	76 00	.....	87 16
August 31.....	.....	Chemist.....	65 00	.....	1 16
August 31.....	.....	Chemist.....	250 00	.....	.....
September 1.....	.....	Commissioner.....	250 00	.....	.....
September 1.....	.....	Assistant commissioner.....	166 66	.....	.....
September 1.....	.....	Chemist.....	166 66	.....	.....
September 1.....	.....	Expert and agent.....	100 00	.....	13 30
September 8.....	.....	Laborer.....	20 00	.....	.....
September 8.....	.....	Expert and agent.....	90 00	.....	30 37
September 8.....	F. D. Tutill.....	Assistant commissioner.....	100 00	.....	37 63
September 8.....	John E. Cady.....	Expert and agent.....	76 00	.....	69 01
September 8.....	John Gardiner.....	Expert and agent.....	76 00	.....	26 91
September 8.....	Charles S. Kellogg.....	Expert and agent.....	78 00	.....	61 13
September 8.....	R. D. Clark.....	Chemist.....	.....	.....	73 47
September 8.....	James E. Ryan.....	Expert and agent.....	100 00	.....	64 23
September 8.....	P. J. Butley.....	Assistant commissioner.....	160 00	.....	113 83
September 10.....	T. R. Gray.....	Expert and agent.....	100 00	.....	114 11
September 10.....	O. C. Grims.....	Expert and agent.....	80 00	.....	122 63
September 10.....	Charles Sears.....	Expert and agent.....	80 00	.....	79 66
September 10.....	J. R. Wheeler.....	Expert and agent.....	80 00	.....	106 78
September 10.....	T. C. DuBois.....	Expert and agent.....	100 00	.....	113 48
September 10.....	James W. Walsh.....	Expert and agent.....	80 00	.....	66 23
September 10.....	James G. McMahon.....	Expert and agent.....	45 00	.....	24 37
September 11.....	E. S. Wilson.....	Expert and agent.....	100 00	.....	126 60
September 11.....	J. J. Sorogan.....	Expert and agent.....	100 00	.....	106 77
September 11.....	W. W. Meeteer.....	Expert and agent.....	100 00	.....	106 60
September 11.....	A. D. Clark.....	Expert and agent.....	100 00	.....	68 26
September 11.....	B. F. Van Valkenburgh.....	Assistant commissioner.....	208 33	.....	39 01
September 20.....	M. A. Perry.....	Assistant commissioner.....	166 67	.....	168 67
September 21.....	Joseph F. Geisler.....	Chemist.....	26 76	.....	.....
September 21.....	E. G. Love.....	Chemist.....	80 00	.....	.....
September 21.....	Robert Dalzell.....	Expert and agent.....	81 00	.....	79 35
September 21.....	F. D. Curtis.....	Expert.....	12 00	.....	10 07
September 21.....	Walter S. Smith.....	Chemist.....	6 00	.....	.....
September 22.....	John Wiley.....	Expert and agent.....	76 00	.....	10 31
September 22.....	.....	Expert and agent.....	76 00	.....	66 67
September 22.....	.....	Agent.....	100 00	.....	4 86
September 22.....	.....	Expert and agent.....	76 00	.....	5 16
September 22.....	.....	Expert and agent.....	66 00	.....	2 20
September 22.....	.....	Expert and agent.....	76 00	.....	26 16
September 22.....	.....	Chemist.....	100 00	.....	.....

DETAILED STATEMENT — (Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1898.				
January 30.....	Expert and agent.....	\$100 00	\$14 32
January 30.....	Assistant commissioner.....	166 66	139 79
February 1.....	Commissioner.....	250 00	.....
February 1.....	Assistant commissioner.....	166 66	.....
February 1.....	Chemist.....	166 66	.....
February 1.....	Expert and agent.....	100 00	.....
February 2.....	Expert and agent.....	75 00	10 80
February 3.....	Chemist.....	.....	30 67
February 3.....	Chemist.....	75 00	31 60
February 3.....	Laborer.....	.....	20 00
February 3.....	Expert and agent.....	15 00	13 06
February 3.....	Chemist.....	21 00	17 88
February 3.....	Expert and agent.....	33 00	14 89
February 3.....	Attorneys.....	300 00	78 96
February 6.....	Chemist.....	100 00	.....
February 8.....	Expert and agent.....	100 00	.....
February 8.....	Chemist.....	97 50	.....
February 8.....	Chemist.....	56 26	.....
February 8.....	Chemist.....	174 00	.....
February 8.....	Expert and agent.....	80 00	62 55
February 8.....	Assistant commissioner.....	100 00	27 61
February 8.....	Attorney.....	280 00	.....
February 8.....	Attorney.....	275 00	1 75
February 8.....	Attorney.....	205 00	.....
February 8.....	Chemists.....	61 66	.....
February 8.....	Chemist.....	119 78	.....
February 9.....	Stenographers.....	36 00	1 10
February 9.....	Expert and agent.....	80 00	70 04
February 9.....	Chemist.....	125 00	11 69
February 9.....	Expert and agent.....	80 00	36 34
February 9.....	Expert and agent.....	80 00	54 40
February 9.....	Expert and agent.....	80 00	61 54
February 9.....	Expert and agent.....	80 00	83 81
February 9.....	Expert and agent.....	80 00	73 24
February 9.....	Assistant commissioner.....	80 00	114 74
February 10.....	Expert and agent.....	206 33	63 63
February 10.....	Expert and agent.....	105 00	56 10
February 10.....	Attorney.....	80 00	.....
February 10.....	Expert and agent.....	80 00	1 46
February 13.....	Chemist.....	63 00	.....
February 13.....	Expert and agent.....	100 00	.....
February 13.....	Expert and agent.....	76 06	8 86

February 13	Expert and agent.	80 00	7 40
February 13	Assistant commissioner.	166 67	84 24
February 13	Expert and agent.	75 00	3 93
February 18	Expert and agent.	75 00	1 70
February 23	Expert and agent.	45 00	31 24
February 23	Expert and agent.	18 00	3 66
February 28	Expert and agent.	75 00	4 20
February 28	Expert and agent.	68 00	26 75
February 28	Expert and agent.	30 00	15 45
February 28	Expert and agent.	160 90	26 26
February 29	Chemist.	90 00	
March 1	Commissioner.	250 00	
March 1	Assistant commissioner.	166 66	
March 1	Chemist.	166 66	
March 1	Expert and agent.	100 00	
March 1	Expert and agent.	75 00	17 25
March 1	Expert and agent.	43 00	19 70
March 2	Expert and agent.	100 00	25 51
March 2	Laborer.	20 00	
March 6	Expert and agent.	80 00	76 12
March 6	Expert and agent.	80 00	89 23
March 6	Expert and agent.	80 00	67 76
March 6	Expert and agent.	80 00	22 53
March 6	Expert and agent.	106 00	70 94
March 6	Expert and agent.	126 00	12 31
March 7	Chemist.	80 00	41 84
March 7	Expert and agent.	80 00	43 25
March 7	Expert and agent.	80 00	65 50
March 7	Assistant commissioner.	100 00	31 70
March 10	Attorney.	30 00	
March 10	Assistant commissioner.	208 33	137 29
March 13	Attorney.	65 00	
March 13	Assistant commissioner.	45 00	22
March 13	Expert and agent.	150 00	29 53
March 13	Chemist.	75 00	1 13
March 13	Expert and agent.	100 00	
March 13	Expert and agent.	67 50	1 60
March 13	Expert and agent.	75 00	3 14
March 13	Expert and agent.	75 00	5 25
March 13	Expert and agent.	80 00	6 60
March 13	Expert and agent.	80 00	82 11
March 13	Expert and agent.	30 00	17 62
March 16	Expert and agent.	18 00	17 15
March 20	Expert and agent.	80 00	17 25
March 20	Chemists.	40 00	39 96
March 21	Attorney.	100 67	
March 21	Assistant commissioner.	300 00	103 91
March 22	Agent.	21 00	29 71
March 22	Expert and agent.	75 00	

DETAILED STATEMENT — (Continued).

Date.	NAME	Position held.	Compensa- tion.	Expenses.
1888.				
March 23.....	Expert and agent.....	.....	850 00	.....
March 23.....	Attorney.....	.....	100 00	.....
March 28.....	Chemist.....	.....	90 00	.....
March 30.....	Expert.....	.....	68 00	308 38
March 30.....	Expert and agent.....	.....	75 00	26 50
April 2.....	Commissioner.....	.....	250 00	.....
April 3.....	F.....	.....	188 68	.....
April 3.....	.....	.....	166 88	.....
April 2.....	.....	.....	100 00	.....
April 3.....	F.....	.....	100 00	.....
April 3.....	.....	.....	.....	29 45
April 4.....	.....	.....	.....	8 83
April 4.....	.....	.....	100 00	30 40
April 4.....	F.....	.....	160 00	28 40
April 4.....	.....	.....	20 00	.....
April 6.....	.....	.....	90 00	11 96
April 6.....	.....	.....	78 00	8 20
April 6.....	.....	.....	68 00	1 00
April 6.....	.....	.....	78 00	6 00
April 6.....	.....	.....	78 00	8 50
April 7.....	Assistant commissioner.....	.....	180 66	122 47
April 10.....	Assistant commissioner.....	.....	208 38	148 06
April 10.....	Expert and agent.....	.....	106 00	61 77
April 10.....	Expert and agent.....	.....	80 00	87 87
April 10.....	Expert and agent.....	.....	80 00	41 18
April 10.....	Expert and agent.....	.....	80 00	82 29
April 10.....	Expert and agent.....	.....	80 00	74 23
April 10.....	Expert and agent.....	.....	80 00	65 96
April 10.....	Expert and agent.....	.....	80 00	106 62
April 10.....	Expert and agent.....	.....	80 00	68 94
April 10.....	Expert and agent.....	.....	80 00	94 52
April 10.....	Stenographer.....	.....	24 70	8 23
April 10.....	Expert and agent.....	.....	42 00	48 97
April 10.....	Chemist.....	.....	128 00	20 08
April 10.....	Chemist.....	.....	19 37	.....
April 10.....	Chemist.....	.....	40 26	.....
April 10.....	Expert and agent.....	.....	24 00	13 00
April 11.....	Attorney.....	.....	110 00	4 80
April 11.....	Attorney.....	.....	40 00	7 22
April 11.....	Attorney.....	.....	20 00	.....
April 11.....	Attorney.....	.....	20 00	.....
April 13.....	Attorney.....	.....	160 00	.....

April	21	C. E. Davenport	Stenographer	48 20	3 40
April	21	Thomas B. Loughlin	Expert and agent	15 00	3 07
April	21	John Wiley	Expert and agent	75 00	3 35
April	21		Expert and agent	24 00	12 51
April	24		Assistant commissioner		9 25
April	26				14 71
April	26		Agent	48 00	20 09
April	27		Assistant commissioner	100 00	
May	1		Commissioner	165 06	
May	1		Chemist	250 00	
May	1		Expert and agent	165 06	
May	1			100 00	
May	2		Assistant commissioner	75 00	35 50
May	2		Expert and agent	150 00	35 16
May	2			80 00	22 00
May	7		Attorney	25 00	
May	7		Attorney	65 00	
May	7		Chemist	134 25	1 26
May	7		Chemist	55 00	10 40
May	7		Chemist	125 00	30 57
May	7		Expert and agent	100 00	48 10
May	7		Expert and agent	80 00	86 28
May	7		Expert and agent	80 00	53 50
May	7		Expert and agent	80 00	45 55
May	7		Expert and agent	80 00	48 18
May	7		Expert and agent	80 00	81 20
May	7		Expert and agent	80 00	48 51
May	7		Expert and agent	105 00	75 51
May	7		Expert and agent	80 00	72 54
May	7		Chemist	27 50	
May	8		Laborer	8 00	
May	8		Expert and agent	45 00	35 99
May	10		Chemist	190 00	
May	10		Laborer	10 00	
May	10		Assistant commissioner	165 57	130 51
May	16		Expert and agent	80 00	25 76
May	16		Expert and agent	75 00	5 25
May	16		Expert and agent	75 00	5 95
May	16		Expert and agent	75 00	2 05
May	14		Attorney	90 00	
May	14		Attorney	60 00	
May	14		Expert and agent	76 00	2 49
May	14		Expert and agent	55 00	1 75
May	14		Expert and agent	18 00	9 25
May	14		Agent	100 00	22 02
May	14		Expert and agent	80 00	24 10
May	14		Expert and agent	37 50	3 75
May	14		Expert and agent	12 00	6 10
May	14		Assistant commissioner	100 00	35 52
May	14		Assistant commissioner	208 33	78 45
May	14		Commissioner	250 00	
June	1				

DETAILED STATEMENT—(Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
June 1. 1888.	Assistant commissioner	\$105 00	.....
June 1.	Chemist	105 00	.....
June 1.	Expert and agent	100 00	.....
June 2.	Expert and agent	75 00	.....
June 2.	Expert and agent	100 00	.....
June 5.	Chemist	20 00	.....
June 6.	Assistant commissioner	165 57	.....
June 6.	Expert and agent	75 00	.....
June 6.	Expert and agent	9 00	.....
June 6.	Expert and agent	25 00	.....
June 6.	Expert	45 00	.....
June 6.	Expert and agent	47 11	.....
June 6.	Expert and agent	25 51	.....
June 6.	Expert and agent	5 50	.....
June 6.	Expert and agent	2 55	.....
June 6.	Expert and agent	2 55	.....
June 6.	Expert and agent	8 54	.....
June 6.	Expert and agent	27 77	.....
June 6.	Attorney	80 00	.....
June 6.	Expert and agent	105 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Expert and agent	80 00	.....
June 6.	Attorney	105 00	.....
June 6.	Attorney	90 00	.....
June 6.	Assistant commissioner	89 63	.....
June 6.	Assistant commissioner	87 75	.....
June 6.	Chemist	80 00	.....
June 6.	Expert and agent	84 00	.....
June 6.	Attorney	60 00	.....
June 7.	Expert and agent	81 00	.....
June 7.	Chemist	.....	.....
June 7.	Laborer	20 00	.....
June 7.	Chemist	125 00	.....
June 7.	Chemist	8 75	.....
June 9.	Chemist	125 00	.....
June 9.	Chemist	16 00	.....
June 12.	Expert and agent	80 00	.....
June 12.	Expert and agent	80 00	.....
June 12.	Expert and agent	24 00	.....
June 12.	Expert and agent	62 08	.....

June	20	P. D. Niver	Attorney	25 00	.....
June	20	B. A. Lettmore	Chemist	100 00	.....
June	20	John Wiley	Expert and agent	75 00	4 90
June	20	Frank Elliott	Expert and agent	75 00	6 45
June	22		Expert and agent	80 00	97 49
June	22		Expert and agent	25 00	3 85
June	23		Expert and agent	25 25	.....
June	26		Expert and agent	75 00	17 49
July	2		Commissioner	250 00	.....
July	2		Assistant commissioner	168 68	4 20
July	2		Chemist	168 68	.....
July	2		Expert and agent	100 00	.....
July	2		Laborer	90 00	.....
July	3		Assistant commissioner	150 00	40 81
July	6		Expert and agent	100 00	59 08
July	6		Expert and agent	80 00	73 82
July	6		Expert and agent	80 00	50 76
July	6		Expert and agent	80 00	77 08
July	6		Expert and agent	105 00	63 10
July	6		Chemist	125 00	21 07
July	6		Stenographer	32 63	5 00
July	6		Assistant commissioner	208 33	76 99
July	6		Stenographer	85 00	4 45
July	6		Attorney	200 00	9 50
July	6		Attorney	140 00	3 65
July	6		Chemist	7 50	.....
July	6		Chemist	18 75	.....
July	7		Chemist	6 10	.....
July	7		Expert and agent	80 00	55 13
July	7		Expert and agent	80 00	91 45
July	7		Assistant commissioner	100 00	34 80
July	7		Expert and agent	80 00	70 79
July	7		Expert and agent	72 00	21 05
July	7		Expert and agent	80 00	73 13
July	7		Attorney	20 00	.....
July	10		Assistant commissioner	165 25	99 06
July	10		Expert and agent	80 00	7 72
July	10		Expert and agent	75 00	3 80
July	10		Expert and agent	75 00	5 50
July	10		Expert and agent	69 00	90
July	10		Expert and agent	80 00	65 49
July	12		Chemist	100 00	.....
July	12		Expert and agent	75 00	11 85
July	12		Expert and agent	49 00	30 45
July	12		Expert and agent	27 00	19 74
July	12		Agent	100 00	5 74
July	13		Expert and agent	80 00	22 20
July	14		Expert and agent	68 49	.....
July	17		Chemist	100 00	.....
July	20		Chemist	75 00	19 10
July	20		Expert and agent	.....	.....

DETAILED STATEMENT—(Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1888.				
July 20.....	n	Expert and agent	\$24 00	\$10 60
July 20.....	.....	Expert and agent.....	75 00	90 00
July 21.....	.....	Expert and agent.....	75 00	66 05
July 26.....	.....	Commissioner	250 00	.....
July 31.....	.....	Expert and agent	75 00	34 14
August 1.....	.....	Assistant commissioner	165 65	.....
August 1.....	.....	Chemist	165 65	.....
August 1.....	.....	Expert and agent.....	100 00	.....
August 2.....	.....	Expert and agent.....	100 00	67 09
August 3.....	.....	Attorney.....	30 00	25 25
August 8.....	LaRoy B. Gove	Expert and agent.....	100 00	70 57
August 8.....	Thomas R. Gray	Expert and agent.....	100 00	34 45
August 8.....	Arch. D. Clark	Expert and agent.....	100 00	.....
August 8.....	William Einzig	Laborer	20 00	.....
August 8.....	R. D. Clark	Chemist .....	.....	.....
August 8.....	F. D. Curtis	Expert	45 00	54 54
August 8.....	James W. Walsh	Expert and agent.....	30 00	45 10
August 8.....	Theodore Deecke	Chemist	10 00	62 64
August 8.....	John Gardiner	Expert and agent	75 00	.....
August 9.....	Charles S. Kellogg	Expert and agent	45 00	37 16
August 9.....	F. D. Tutbill	Assistant commissioner	100 00	41 48
August 9.....	E. S. Wilson	Expert and agent.....	100 00	48 43
August 9.....	.....	Expert and agent.....	100 00	55 55
August 9.....	.....	Expert and agent.....	100 00	30 26
August 9.....	.....	Expert and agent.....	100 00	77 20
August 9.....	.....	Assistant commissioner	208 83	154 53
August 9.....	.....	Expert and agent.....	80 00	45 91
August 9.....	.....	Expert and agent.....	75 00	38 41
August 9.....	.....	Expert and agent.....	75 00	65 25
August 9.....	.....	Chemist	72 69	5 19
August 9.....	.....	Expert and agent.....	80 00	50 32
August 9.....	.....	Assistant commissioner	150 00	98 67
August 9.....	.....	Expert and agent	75 00	45 05
August 9.....	.....	Expert and agent.....	100 00	78 55
August 9.....	.....	Expert and agent.....	80 00	57 79
August 9.....	.....	Expert and agent.....	100 00	30 31
August 9.....	.....	Expert and agent.....	75 00	9 15
August 22.....	.....	Chemist	110 00	.....
August 27.....	lin	Expert and agent	50 00	57 05
August 27.....	.....	Expert and agent.....	75 00	90 57
August 27.....	.....	Expert and agent.....	75 00	26 25
August 27.....	.....	Expert and agent.....	72 50	55 20
August 27.....	.....	Expert and agent.....	75 00	77 45

August 25.....	George B. Fellows.....	Expert and agent.....	100 00	.....	1 55
August 30.....	Leander W. Cooley.....	Expert and agent.....	66 00	.....	13 46
August 30.....	Jeremiah Clark.....	Expert and agent.....	75 00	.....	.....
August 30.....	Stillwell & Gladding.....	Chemist.....	15 00	.....	35
August 30.....	E. G. Love.....	Chemist.....	64 67	.....	.....
August 30.....	Joseph F. Geisler.....	Chemist.....	10 00	.....	.....
August 31.....	.....	Assistant commissioner.....	166 67	.....	132 53
August 31.....	.....	Agent.....	100 00	.....	10 94
August 31.....	.....	Expert and agent.....	75 00	.....	37 16
August 31.....	.....	Chemist.....	65 00	.....	1 16
August 31.....	S. A. Latimore.....	Chemist.....	230 00	.....	.....
September 1.....	Joseph K. Brown.....	Commissioner.....	260 00	.....	.....
September 1.....	.....	Assistant commissioner.....	166 66	.....	.....
September 1.....	.....	Chemist.....	166 66	.....	.....
September 1.....	.....	Expert and agent.....	100 00	.....	13 80
September 8.....	.....	Laborer.....	20 00	.....	.....
September 8.....	William G. Spence.....	Expert and agent.....	90 00	.....	30 37
September 8.....	F. D. Tuthill.....	Assistant commissioner.....	100 00	.....	37 53
September 8.....	John E. Cady.....	Expert and agent.....	75 00	.....	69 01
September 8.....	John Gardiner.....	Expert and agent.....	75 00	.....	23 91
September 8.....	Charles S. Kellogg.....	Expert and agent.....	78 00	.....	61 13
September 8.....	R. D. Clark.....	Chemist.....	100 00	.....	73 47
September 8.....	James E. Ryan.....	Expert and agent.....	100 00	.....	64 23
September 8.....	P. J. Sutley.....	Assistant commissioner.....	160 00	.....	113 83
September 10.....	T. H. Gray.....	Expert and agent.....	100 00	.....	114 11
September 10.....	O. C. Griffin.....	Expert and agent.....	80 00	.....	122 63
September 10.....	Charles Bears.....	Expert and agent.....	80 00	.....	79 86
September 10.....	J. R. Wheeler.....	Expert and agent.....	100 00	.....	106 78
September 10.....	T. C. Dulbals.....	Expert and agent.....	80 00	.....	113 48
September 10.....	James W. Walsh.....	Expert and agent.....	46 00	.....	63 22
September 10.....	James G. McMahon.....	Expert and agent.....	100 00	.....	24 37
September 11.....	E. H. Wilson.....	Expert and agent.....	100 00	.....	128 60
September 11.....	J. J. Scrogan.....	Expert and agent.....	100 00	.....	106 77
September 11.....	W. W. Meeteer.....	Expert and agent.....	100 00	.....	108 00
September 11.....	A. D. Clark.....	Expert and agent.....	100 00	.....	63 26
September 11.....	B. F. Van Valkenburgh.....	Assistant commissioner.....	208 33	.....	39 01
September 20.....	M. A. Perry.....	Assistant commissioner.....	166 67	.....	188 67
September 21.....	Joseph F. Geisler.....	Chemist.....	86 75	.....	.....
September 21.....	E. G. Love.....	Chemist.....	30 00	.....	.....
September 21.....	Robert Dalzell.....	Expert and agent.....	81 00	.....	79 35
September 21.....	R. D. Curtis.....	Expert.....	12 00	.....	10 07
September 21.....	Walter S. Smith.....	Chemist.....	5 00	.....	.....
September 22.....	John Wiley.....	Expert and agent.....	75 00	.....	10 31
September 22.....	Frank Elliott.....	Expert and agent.....	75 00	.....	66 67
September 22.....	John Foley.....	Agent.....	100 00	.....	4 66
September 22.....	.....	Expert and agent.....	75 00	.....	5 16
September 22.....	.....	Expert and agent.....	66 00	.....	2 20
September 22.....	.....	Expert and agent.....	75 00	.....	26 15
September 22.....	.....	Chemist.....	100 00	.....	.....

DETAILED STATEMENT—(Continued).

Date.	NAME.	Position held.	Compensation.	Expenses.
1898.				
September 22.....		Expert and agent.....	\$75 00	39 34
September 23.....		Expert and agent.....	100 00	49 50
September 27.....		Chemist.....	35 00	.....
September 27.....		Chemist.....	30 00	.....
September 27.....		Chemist.....	23 50	.....
September 27.....		Attorney.....	35 00	3 89
September 27.....		Expert and agent.....	75 00	75 74
September 27.....		Expert and agent.....	100 00	.....
September 27.....		Expert and agent.....	27 00	14 40
September 27.....		Commissioner.....	250 00	.....
September 27.....		Assistant commissioner.....	185 68	.....
September 27.....		Chemist.....	145 68	.....
September 27.....		Expert and agent.....	100 00	.....
	Oscar H. Bowle.			
	J. K. Brown.....			
	Geo. L. Flanders.			
	R. D. Clark.....			
	Geo. B. Fellows			

Under the provisions and requirements of chapter 298, Laws of 1888, passed May fifteen, I have employed the following persons as experts, who have been paid, during the last fiscal year, the sums set opposite their names for services and expenses respectively :

Date.	NAME.	Position held.	Compensation.	Expenses.
1888.				
July 12...	W. W. Hall	Cheese expert	\$130 00	\$66 99
July 12...	G. A. Smith	Cheese expert	50 00	10 22
July 22...	W. W. Hall	Cheese expert	130 00	51 99
Aug. 9...	F. D. Curtis	Butter expert	70 00	35 80
Aug. 22...	G. A. Smith	Cheese expert	130 00	36 34
Aug. 30...	M. T. Morgan	Cheese expert	30 00	4 38
Sept. 10...	W. W. Hall	Cheese expert	135 00	104 00
Sept. 10...	G. A. Smith	Cheese expert	135 00	84 02
Sept. 10...	M. T. Morgan	Cheese expert	135 00	56 44
Sept. 18...	F. D. Curtis	Butter expert	80 00	37 11

These experts are still at work giving instruction in the art of butter and cheese-making. For particulars see their report, which is submitted herewith.

It is my opinion that they have done very much to improve the quality of the dairy products of the State, and that the amount of money appropriated for this purpose, when compared with the results, both to the producer and consumer, shows it to have been a judicious and beneficial investment. The testimony already received as to the results show that the wisdom of the Legislature in thus providing is recognized and appreciated.

In addition to the above, this department has expended during the last fiscal year for stationery, blanks, expressage, telegraphing, postage and the expenses of the Commissioner, the sum of \$2,078.71. We have paid over to the State Treasurer, of moneys received as fines and penalties, the sum of \$5,591.83.

J. K. BROWN,
New York State Dairy Commissioner.

APPENDIX.

REPORT OF R. D. CLARK, M. D., DEPARTMENT CHEMIST.

ALBANY, N. Y., *December* 10, 1888.

HON. JOSIAH K. BROWN,

New York State Dairy Commissioner, Capitol, Albany, N. Y.:

I respectfully submit the following report:

The process of cheese-making employed by D. M. Macpherson, of Lancaster, Ontario, called the "Time System," is as follows:

He divides the process into eight stages, beginning with setting the milk and ending with the pressed cheese.

The milk is set at as low a temperature as is consistent with the action of the rennet, so as to retain the milk-fat. Mr. Macpherson puts it from 80° to 82° Fahr.

Sufficient rennet is used to coagulate in from ten to fifteen minutes and render the curd fit to cut in from fifty-five minutes to an hour under ordinary circumstances. This constitutes his first stage.

The second stage consists of cutting the curd, the temperature remaining at from 80° to 82° Fahr. Stewing is begun as soon as cutting is completed, and, when the curd is well healed over, the temperature is raised to 98° Fahr.

Healing of the curd, as defined by Mr. M., is as follows: "Healing of the surface of the curd is the forming of a pellicle or rind on the surface of the curd for the purpose of holding the cream globules after the curd is broken, and acts as a strainer to allow the clear whey to pass out without carrying off the cream." From the completion of the cutting of the curd to the point where the temperature reaches 98° comprises the third stage.

The time occupied in the above stages depends upon the condition of the milk when set. With old milk, slightly acid, it will

take but a few minutes, with very fresh, sweet milk, from four to six hours.

Vigorous stirring is kept up for fifteen minutes after the temperature is raised and care is taken to keep any portion of the curd from resting too long on the hot tin, thereby overheating it. The vat is kept covered with a cloth and at the first show of acid by the hot-iron test, the whey is drawn. This completes the fourth stage.

The curd is then thoroughly hand-stirred from four to six times and packed in a thin layer over the whole surface of the bottom of the vat, keeping the temperature equitable throughout the curd by means of the cloth cover, and allowing it gradually to fall to 95° by the time it is ready to grind.

The curd is then cut into rather large pieces and turned bottom side up every fifteen minutes till it shows exactly half an inch upon the hot iron, when it is ready to grind. If the curd is good it is ground but once; if it contains pin-holes, oftener. This is the fifth stage.

After grinding, the curd is stirred and well aired for one hour and a half, keeping the temperature well up, so that it will be at 90° when ready for salting. The salt is evenly stirred through in the proportion of two and one-half pounds to 1,000 pounds of milk. This is the sixth stage.

After salting, the curd is again stirred and aired for one hour, the temperature meanwhile having slowly fallen to 80°, when it is put to press, great care being observed to have the hoops, cloths and followers perfectly clean and sweet. This is the seventh stage.

The eighth stage is the pressing. Light pressure is made at first, but very heavy at last, seeing that the pressure is evenly applied to the parts of the curd.

In order to fully comprehend this system it is necessary to understand the principles upon which it is based. Mr. Macpherson's philosophy of making cheese is to properly manipulate or control the two active agents which operate in the milk to form cheese, viz.: rennet and fermentation. The rennet causes the caseine to coagulate, which holds in suspension the fat, and by its contraction expels the whey. It also changes the nature of the

constituent elements of the curd (water, fat and caseine) so that they will "assimilate" or mix together in a homogeneous mass.

The fermentation is of two kinds, lactic and putrefactive. These are the natural changes which milk undergoes when left to itself under proper conditions. The putrefactive fermentation is antagonized by the lactic, which is the desirable one for making cheese. Its action in the process is to prevent putrefactive change, which would spoil the product, and to assist the rennet in "assimilating" the curd, which it does when it is carried just far enough, but disintegrates it when carried too far.

The action of these two agents are mainly influenced by heat and "consistency of the milk and curd."

The term "consistency" here means the relative amount of the solids to the fluid in the milk; also its quality as to purity, and the amount of moisture in the curd at the fifth stage of the process. That is to say, that the action of the rennet will be affected by taints or too much water in the milk and the development of the lactic acid ferment is so influenced by a too moist curd at the point where this development takes place that it will disintegrate the curd instead of assimilating it, as it should do.

It is claimed that these agents and influences can be so controlled as to produce that particular character of cheese which the market may demand and which consequently will bring the highest price.

Under these principles the process of cheese-making is divided into two distinct stages, the first ending with the expulsion of all the "surplus" whey from the curd and is due to the action of the rennet as influenced by heat. The second ends at the point where the curd is ready to press, and comprehends the "assimilative" action carried on between the rennet and lactic fermentation on the one hand, and the caseine, fat and water on the other.

A more scientific division would be into three stages, the two just described constituting the first two, which are purely chemico-physiological in their nature, and pressing, the third, which is purely mechanical.

In explanation of the system, Mr. Macpherson* says: "The most important points of cheese-making are at stages four and six.

* Cheese-makers' Manual, by D. M. Macpherson.

All whey must be out of the curd at stage four, but not necessarily off the curd. Too much moisture in the curd, when the lactic acid shows first on hot iron, does not agree with the rennet action. Instead of the proper moisture of the curd being taken up and assimilated with the caseine and butter, it is opposed by this too much moisture, and forms too much lactic acid inside of the particles of curd and produces a contrary effect of disintegration, which is shown in a sour cheese, by being hard and brittle. The curd must be made firm and solid before stage four is reached. If the usual rennet action does not do it, then *hand-stirring* is the next best. No time must be lost in getting rid of the whey and hardening the curd at this stage. If the curd is not firm and solid at stage four it will be sure to be a sour, bitter, poor-flavored and brittle-textured cheese. If the curd is heated above 98° the curd will get too firm, and a loss of average and quality follows; but at 98° the moisture is held by the rennet action, and the curd will not get too firm, even by extra hand-stirring all through the process, from the time the whey is drawn off. If a closer heat than 98° is obtained the curd will likely hold too much moisture and make a soft, doughy and pasty-textured cheese. This is why October and November cheese is usually this texture, because the curd being allowed to cool off before the rennet action contracts the curd sufficiently to expel the proper amount of whey; and so, being left in the sweet curd, it is assimilated with the caseine and butter to form this objectionable character of cheese.

“The times marked at the temperatures given are such as to produce the best results; if a lower temperature of curd is allowed, then a longer time must elapse for the proper amount of fermentation. The warmer the curd the faster the changes progress after stage four, and the colder the curd the longer; hence the importance of keeping up a uniform heat as given. The thermometer should be used, and put into the curd at all stages to find out its temperature; the feeling of the hand is too liable to vary. All thermometers should be tested and proved correct at 98° before being used. *This is very important*, as one or two degrees either way may hurt the product very seriously.

“Cheese-making is virtually divided into two distinct divisions : From one to four is for expelling the surplus moisture, and from four to eight is the action of fermentation and rennet action combined ; hence the importance of getting rid of all surplus moisture up to stage four, and then maintaining uniform heat in the curd from stage four to stage seven, which, by experience, gives the best results. The advantages of this system of making cheese for the English market is, that it can be easily changed to suit the requirements of time and place. If the cheese is too dry and hard, then a lesser time from stage four to stage seven is required ; if the cheese is too soft and porous, then a longer time from stage four to stage seven is needed, provided everything else in the manipulation is equal. It is necessary to note that the amount of rennet and the amount of heat kept in the curd is a very important factor. *Rennet* fills the office of expelling the surplus whey at certain temperatures, then retaining a certain amount of moisture to cure the cheese down to a salvy, rich, clear, silky texture. *Heat* is used to assist this action of rennet in all its forms, also to bring on lactic fermentation to hold in check the too rapid action of the rennet in curing, hence will be seen the importance of having some means of measuring the action of each agent to be used to attain the best results.”

COMPOSITION OF CANADIAN CHEESE.

The following samples were from cheese made at different factories in Canada, some from the Allen Grove Cheese Combination (of sixty-six factories), controlled by D. M. Macpherson, Lancaster, Ontario :

COMPOSITION OF CANADIAN CHEESE.

ANALYZED.	Sample number.	Water, per cent.	Fat, per cent.	Casoline, etc.	Ash, per cent.	Made at—
1888.						
October 24.....	1	32.38	20.59	43.52	3.51	Dunkeel factory, Ont., Canada, September 15, 1888; cured cheese.
October 24.....	2	35.46	24.60	36.41	3.53	Bainsville factory, Ont., Canada, October 25, 1888; green cheese.
October 24.....	3	33.17	23.09	40.29	3.45	Listwell factory, Ont., Canada, August 20, 1888; cured cheese.
October 24.....	4	32.28	22.24	42.15	3.33	—— factory, Ont., Canada, September 15, 1888; cured cheese.
October 24.....	5	35.36	20.17	41.19	3.28	Napanee factory, Ont., Canada, September 15, 1888; cured cheese.
October 24.....	6	33.33	21.90	41.50	3.27	This was from (Allen, G. C.,) a cheese weighing 1,000 pounds, August 15, 1888; cured cheese.
October 27.....	7	36.28	24.79	35.79	3.14	Bellville factory, Ont., Canada, September 18, 1888; cured cheese.
October 27.....	8	34.28	20.13	41.94	3.65	Listwell factory, Ont., Canada, September 13, 1888; cured cheese.
October 27.....	9	33.35	21.25	41.80	3.60	Ganoque factory, Ont., Canada, September 15, 1888; cured cheese.
October 27.....	10	32.30	23.53	40.87	3.30	—— factory, Ont., Canada, September 20, 1888; cured cheese.
October 27.....	11	36.58	25.67	33.82	3.93	Allen, G. C., factory, Ont., Canada, July, 1887; over one year old.

It will be seen that No. 11 in the table was from a cheese more a year old. Its flavor was fine, its texture was firm — but dry and salvy when pressed between the fingers — and had no smell of decay whatever. This confirms Mr. Macpherson's statement that when a cheese is perfectly "assimilated" it will not lose its flavor when kept for a time, and will improve in its digestibility. That is, in other words, if a cheese is properly made it does not cure in a certain time and then begin to deteriorate, but keeps on improving for a long time. An opinion we have held for some time. The artificial digestion experiments on cheese will be given further on and it will be noticed that this sample of old cheese was readily acted upon by the digestive fluid.

The following is the composition of a sample of whey made at one of the Allen Grove combination factories, on October 22, 1888. Analyzed October 26, 1888:

	Per cent.
Water	93.39
Fat	0.287
Sugar	5.583
Lactic acid	0.45
Ash	0.29

THE MODIFIED CHEDDAR PROCESS AS USED BY THE CHEESE INSTRUCTORS OF THE NEW YORK STATE DAIRY COMMISSION.

The milk is placed in the vat and heated from 82° to 84° Fahr. in the warm weather of the summer, and to 86° Fahr. in the cool weather of the fall. If color is to be used it should be stirred in thoroughly before adding the rennet. Sufficient rennet is used to coagulate the caseine in from twenty to twenty-five minutes (two and one-half to three ounces rennet extract) and bring the curd into condition fit to cut in from fifty minutes to one hour.

The extract or powder, on account of their uniformity of strength, is considered safest to use, and, also, there is not the liability to taints that there is when makers prepare their own rennet in tubs, jars, etc.

The curd is then cut lengthwise of the vat with the horizontal knife.

The cutting is begun as soon as the curd will cleave clean from the side of the vat, or break clean before the finger, or cut without

breaking before the knife. It is then cut lengthways and crossways with the perpendicular knife.

The cutting should be all done as soon as possible after beginning as it is claimed that if the curd is in proper condition, or in technical language, if it is just hard enough to begin on, the quicker it is cut the less waste there will be. If the curd is too hard the knife will break off fine particles which are lost in the whey.

When the cutting is completed the curd is gently agitated for about fifteen minutes. The heat is then slowly applied up to 90° Fahr., then more rapidly until the highest point is reached (from 98° to 102° Fahr.), in order to preserve the most fat the lowest temperature which will cause the complete expulsion of the surplus whey should be used, though with some milk it will be necessary to heat up to 102° Fahr.

Great care should be taken during the heating process to stir so thoroughly that not any part of the curd will become overheated by resting too long upon the hot tin, because this would melt the fat, and partially destroy the activity of the rennet in that portion of the curd. Keep the curd agitated until it reaches that stage of contraction that it will not pack. The vat is then covered with a cloth in order to retain an equable heat through all parts of the mass, stirring under the cover occasionally to keep the curd loose.

The curd is allowed to remain in this position until sufficient acid is developed to show a quarter of an inch of fine thread by the hot-iron test. The whey is then all drawn off and the curd packed about equally on the two sides of the vat, leaving a clean space in the center for the purpose of draining.

After a few minutes, and for the same purpose, the layers of curd are cut lengthways through their centers and again crossways into strips or blocks about twelve inches long; the center strips are turned bottom-side up and placed upon the outside strips, being kept covered with a cloth.

In ten minutes or so the two piles are turned over and placed in the center of the vat, one on top of the other, forming a row of four layers.

Up to this point the chief object of the process has been to separate the whey from the curd; but from this point out the process is distinctly one of digestion or "assimilation."

The pile is left lying in this way for a time and as it flattens out it is again cut and doubled up and kept as close as possible in order to retain the temperature.

It is important that, during these manipulations, the temperature be kept up to about 98° Fahr., as this is the most favorable for the maturing of the curd, and to have it assume that flaky appearance and velvety feeling which it must do in order to be a perfect curd.

If, from any cause (as tainted milk, etc.), there is a development of gas at this stage, the packing must be continued until the gas cells become flattened and the curd appears solid and shows about the same texture as a perfect curd.

The production of lactic acid fermentation is important here to overcome putrefactive fermentation, which is very liable to develop, especially in hot weather, and which is very destructive to the flavor, quality and firmness of the cheese.

Where the curd has reached the proper stage of digestion it can be torn into strings and ribbons the whole length of the piece like the inner bark of an elm tree, and the torn surface has a fibrillated appearance like the cooked flesh on a chicken's breast.

The curd is now cut up into strips, spread out in the bottom of the vat, allowed to cool down to from 88° to 85° Fahr., and ground. The salt is applied as the curd passes through the mill. The salt is then stirred in and the curd is reground and put to press.

The pressure must be slight and applied gradually till the whey is pressed out and the rind is formed. If it is left in the press from twelve to eighteen hours it will retain its form better and be more solid than if pressed in less time.

The above method is based upon the use of *pure* milk. To make a close, meaty cheese from floating curds, it is necessary to modify the process. In this case use the same amount of rennet, cut a little finer, and stir from ten to fifteen minutes without steam.

Apply the steam slowly at first, taking plenty of time for the temperature to rise to the highest point needed (100° Fahr.). The curd must not be allowed to pack on the bottom of the vat. Use every means possible to drive out the surplus whey.

When the acid shows one-half inch on the hot iron, draw off all the whey, pack the curd in as small a space as possible, cover the vat so as to retain the heat, cut the curd into strips often, and repack.

When the gas has fully developed, run the curd through the mill, repack it and keep it covered so as to retain the heat, letting in dry steam under the cover to warm the curd, if necessary.

When the gas-holes become flattened, and the curd appears close and solid and shows about the same texture as one made from good milk, cut it up into strips and spread it out thin over the vat. Then allow it to cool to about 85° Fahr., grind, salt the same as for a good curd, and put it to press. Allow it to remain in press as long as your time will permit, at least eighteen hours.

COMPOSITION OF CHEESE MADE BY THE MODIFIED CHEDDAR PROCESS.

<i>Sample No. 1.</i>		Per cent.
Water.		37.08
Fat.		28.72
Caseine		30.45
Ash.		3.75

Analysis made September 14, 1888.

The lot of cheese from which this sample was taken was made at Mr. Merry's factory, Verona, N. Y., the day before the plug was drawn (September 11, 1888), that is, as soon as the cheese was taken out of the press, and consequently was very green. It was also made from a "floating curd" due to "tainted" milk. It possessed a good flavor, was close, free from gas-cells and had no free moisture.

The following is the analysis of the whey from the same:

	Per cent.
Water.	93.62
Fat.	0.14
Sugar, little albumen, little caseine and lactic acid	5.80
Ash.	0.44
	<hr/> 100.00 <hr/>

Great pains was taken to get a fair average sample of the whey, which is attended with some difficulty.

Sample No. 2.

	Per cent.
Water.	33.30
Fat	33.02
Caseine	30.19
Ash	3.49

Analysis made September 14, 1888.

This cheese was also made at Mr. Merry's, and the plug drawn as soon as it was taken out of the press, but it was from a perfect working curd. Its qualities were a little better than those of No. 1.

Sample No. 3.

	Per cent.
Water.	36.90
Fat	27.45
Caseine.	31.92
Ash.	3.73

Analysis made October 26, 1888.

This sample was taken from the same cheese as "sample No. 1." The plug was drawn on the 26th day of October, 1888, forty-five days after it was made, hence a cured cheese.

Sample No. 4.

	Per cent.
Water.	34.95
Fat.	25.33
Caseine.	36.54
Ash.	3.18

Sample No. 5.

	Per cent.
Water	35.90
Fat	25.85
Caseine	34.56
Ash	3.69

Nos. 4 and 5 were analyzed October 24, 1888. They were made at W. W. Hall's factory. No. 4 was made October 20, 1888; green cheese. No. 5, September 12, 1888; cured cheese.

Sample No. 6.

	Per cent.
Water	33.04
Fat	25.18
Caseine	38.36
Ash	3.42

<i>Sample No. 7.</i>		Per cent.
Water		34.46
Fat		26.93
Caseine		35.29
Ash		3.32

The two latter samples were made at the Heuvelton factory, J. C. Birge, proprietor and maker. No. 6 was made September 24, 1888, and was partly cured. No. 7, October 19, 1888, and was green.

<i>Sample No. 8.</i>		Per cent.
Water		35.67
Fat		23.95
Caseine		37.33
Ash		3.05

Made September 20, 1888, at J. T. Hodgkin's factory, Spragueville, New York. Cured cheese.

<i>Sample No. 9.</i>		Per cent.
Water		35.98
Fat		25.59
Caseine		35.22
Ash		3.21

Made September 12, 1888, at Steel's Corners factory, Emery Kinsman, proprietor. Cured cheese.

<i>Sample No. 10.</i>		Per cent.
Water		36.34
Fat		25.83
Caseine		34.67
Ash		3.16

Made September 25, 1888, at Hailsboro, New York, Parks Brothers, proprietors. Cured cheese.

The following samples of whey produced under the modified Cheddar process were analyzed October 24, 1888, and contained:

<i>Sample A.</i>		Per cent.
Water		93.34
Fat		0.16
Sugar, little albumen, little caseine		5.83
Lactic acid		0.36
Ash		0.31
		<u>100.00</u>

	<i>Sample B.</i>	Per cent.
Water		93.47
Fat		0.059
Sugar, little albumen, little caseine		5.801
Lactic acid		0.34
Ash		0.33
		<hr/> 100.000 <hr/>

The sample of whey No. 1 came from the Heuvelton factory, where samples of cheese Nos. 6 and 7 came from. It was made October 20, 1888.

Sample No. 2, came from the factory of W. W. Hall, the same as samples of cheese Nos. 4 and 5. It was made October 20, 1888, so that it was from the curd of cheese No. 4.

STIRRED CURD PROCESS OF MAKING CHEESE.

The milk is put in the vat and set at a temperature of 82° to 84° Fahr. If it is to be a colored cheese the color is then stirred in.

Use sufficient rennet to cause coagulation in from twenty to twenty-five minutes to bring it fit to cut in from fifty minutes to one hour.

It is then cut as soon as it will break clean before the finger, lengthways and crossways, rather finer than is usual in the Cheddar process; some use the horizontal knife first and others prefer to use the perpendicular knife first. The point aimed at is to get an even fine cut on the curd.

The curd is then gently agitated for a short time with the hands before applying the heat.

The heat is then applied gently at first, gradually raising the temperature to from 98° to 100° Fahr., which usually takes about an hour. Pains is taken to keep the curd thoroughly agitated so that it will not pack together. It is essential that the heat be evenly distributed throughout the mass of curd. The whey is now partly drawn off, leaving sufficient to just cover the curd. The vat is then covered in order to retain the temperature, and the curd kept loose by occasional stirring with the hands. It is kept in this condition until enough acid is developed to show about one-half inch of fine strings by the hot-iron test.

It is then dipped into the curd sink and kept fine by stirring with the hands, and is held there until sufficient acid is developed to show from an inch to an inch and a half on the hot iron, and is salted in the proportion of three pounds to the one thousand. It is then piled up in one end of the sink, covered with a cloth, and allowed to lay for from two to three hours, when it is put to press. The temperature, when it is put to press, should be about 80° Fahr.

<i>Sample No. 1.</i>		Per cent.
Water		35.68
Fat		33.30
Caseine, etc.		27.56
Ash		3.46
		<hr/>
		100.00
		<hr/>

Analyzed September 28, 1888.

This sample came from the Princeton Dairy Association. The factory is located at Rynex Corners, New York. The cheese was made by Ella Claflin on the 27th September, 1888 (green cheese).

The following sample of whey is from the same maker as the above cheese :

above cheese:

	Per cent.
Water.....	93.94
Fat.....	0.21
Sugar, little caseine, albumen and lactic acid.....	5.45
Ash.....	0.40
	<hr/>
	100.00
	<hr/>

<i>Sample No. 2.</i>		Per cent.
Water		17.41
Fat		41.36
Caseine		37.13
Ash		4.10
		<hr/>

Analyzed October 11, 1888.

<i>Sample No. 3.</i>		Per cent.
Water		36.37
Fat		32.42
Caseine		28.34
Ash		2.87
		<hr/>

October 19, 1888. Green cheese.

Nos. 2 and 3 were made at Smith & Boyd's, pine-apple cheese factory, New York.

No. 2 was made October 10, 1888; No. 3, October 17, 1888. Both were green cheese.

The following samples of whey came from the same factory and came from the green cheese.

<i>Sample A.</i>		Per cent.
Water		93.24
Fat		0.88
Sugar, etc.....		5.51
Ash		0.37

Analyzed October 12, 1888.

<i>Sample B.</i>		Per cent.
Water		93.50
Fat		0.10
Sugar, etc.....		6.05
Ash		0.35

Analyzed October 19, 1888.

Sample A came from same curd as cheese sample No. 2; and sample B from cheese No. 3.

<i>Sample No. 4.</i>		Per cent.
Water		41.35
Fat		27.02
Caseine		28.53
Ash		3.10

Analyzed October 19, 1888.

Cheese No. 4 was made at the Lyon Brook factory, Oxford, New York, Haynes Bros., proprietors, on October 16, 1888. Green cheese.

The two following samples of whey came from the Lyon Brook factory.

<i>Sample A.</i>		Per cent.
Water		93.14
Fat		0.32
Sugar		6.16
Ash		0.38

Analyzed October 12, 1888.

Sample B.

	Per cent.
Water	93.08
Fat	0.27
Sugar	6.30
Ash	0.35

Analyzed October 19, 1888.

Sample A was made October 10, 1888, and sample B, October 16, 1888, and was from the same batch as cheese sample No. 4.

Sample No. 5.

	Per cent.
Water	35.35
Fat	25.28
Caseine	36.10
Ash	3.27

Analyzed October 22, 1888.

Sample No. 6.

	Per cent.
Water	32.98
Fat	23.57
Caseine	40.14
Ash	3.31

Analyzed October 22, 1888.

Samples Nos. 5 and 6 were made at the Gouverneur factory, A. W. Overacker, proprietor; No. 5 was made October 13, 1888 and No. 6, September 15, 1888. The former is a green cheese and the latter cured.

Sample No. 7.

	Per cent.
Water	32.84
Fat	29.77
Caseine	33.27
Ash	4.12

Analyzed October 22, 1888.

Sample No. 8.

	Per cent.
Water	33.79
Fat	28.43
Caseine	34.38
Ash	3.40

Analyzed October 22, 1888.

These two samples were from the factory of C. W. Overacker, South Gouverneur, New York. No. 7 was made October 18, 1888 (a green cheese); No. 8 was made September 15, 1888 (a cured cheese).

The following is the composition of the whey taken from cheese No. 7:

	Per cent.
Water	93.07
Fat	0.099
Sugar, etc	6.171
Lactic acid	0.34
Ash	0.32

Analyzed October 24, 1888.

Sample No. 9.

	Per cent.
Water	37.79
Fat	30.37
Caseine	28.15
Ash	3.69

Analyzed October 22, 1888.

Sample No. 10.

	Per cent.
Water	33.05
Fat	23.15
Caseine	40.20
Ash	3.60

Analyzed October 22, 1888.

Nos. 9 and 10 were made at the Crystal Springs factory, Gouverneur, New York, W. E. Smith, proprietor. No. 9 was made October 18, 1888 (green cheese); No. 10 was made September 21, 1888 (cured cheese).

The following is a sample of whey from the same factory and is from cheese No. 9.

	Per cent.
Water	93.30
Fat	0.19
Sugar, etc	5.78
Lactic acid ..	0.39
Ash	0.34

Analyzed October 24, 1888.

STATEMENT OF MR. ARTEMUS HOLDRIDGE, OF WEST BURLINGTON,
OTSEGO COUNTY, N. Y.

In making our special kind of square cheese we receive the milk in the usual form ; we use the "Bavarians," and we soak out, to start with, one rennet. We soak them in whey in two sacks. We put in one rennet as often as is necessary to make the liquor strong enough to coagulate the milk fit to cut in nearly an hour, sometimes a little less, and when the whey first rises on the curd, before any ferment starts, we dip whey in them, just as much as we use to fill up the jar, and keep for one vat about five (5) gallons of liquor. Renew it every day. We cut up the curd fine and heat slowly to 100° ; it depends a good deal whether your vat is full or half full, the shallower your milk is in the vat the more heat you want to get the same result.

When the curd is sufficiently cooked, so you can just squeeze it up in your hand and the curd won't unite together, the whey is drawn ; just as soon as you can eliminate all the whey, dipped into the tin curd sink (without any cloth, with perforated tin in the bottom), kept fine by raking the curd over, and salted immediately lying in the vat, not packed at all.

Then, if the weather is very warm, we would have to stir it over after it stands in the vat for fifteen or twenty minutes, and continue that process of stirring that curd over and letting it drain until 5 o'clock. This is done to allow the gas and odors to escape.

Then it is put to press and pressed until the next morning and cut up into ten-pound (10-pound) cakes, the shape of the cheese, and that cutting opens the cheese through both ways so that you can see what you have got as a cheese — what the body is — whether there is whey remaining back in it, or whether there is gas in places. Then it is bandaged and replaced in the curb and pressed until 5 o'clock in the afternoon. I am making a cheese about five and one-half ($5\frac{1}{2}$) inches square and ten and one-half ($10\frac{1}{2}$) inches long.

Commissioner BROWN.—If cheese made in this way was to be made round, they would have to be placed in a hoop instead of this curb?

Mr. HOLDRIDGE.—Yes, sir ; at the same time.

Commissioner BROWN.—The point is to adapt this to other forms of cheese?

Mr. HOLDRIDGE.—That form is just as I have made them for nineteen years.

Q. How do you cut this cheese up, with what, and how fine?

A. With a knife and very fine; cut it immediately; I don't let it stand and get firm; I don't cut the cheese; I cut the curd fine.

Q. Is it possible to make cheese the way you make it and make round cheese?

A. Yes, sir.

Q. Tell us how to do that; if you were making a round cheese, making the curd just as you have described it, and put it into your hoop, and put it to press, how much pressure would you use — what you would call a moderate pressure?

A. Let the pressure be gradual; the cheese will drain dry.

Q. You put on a gentle pressure, and increase from time to time, but not intending to press hard or close; and let it stand there how long; next morning?

A. I always let it stand until 5 o'clock in the afternoon when I again want to put my curd in; that makes better surface for the cheese (small).

Q. When do you take it out and put it in, and cut it up again?

A. I am speaking of round cheese.

Q. Don't you take round cheese out, and press it over again?

A. Not at all; this is cut up into eight cheeses.

Q. About cutting it up fine, like kernels of corn?

A. That is in the whey.

Q. Now, I understand that, after you actually put it to press, you don't cut it up at all again?

A. Not the round cheese, and we don't cut this square cheese only to cut this cake into smaller pieces, the size of the cheese, and put the bandage on; but in cutting it this way it lets out a certain amount of gas, and you can see what the texture and body of the cheese is.

Q. I understood you to say that you put your cheese to press, and let it stay a few hours, and then took it out and cut it into small pieces, and pressed it over again?

A. No; that I don't do; I did not say that.

Q. Then I don't see but that round cheese is practically the same as the other, so far as the pressing goes, except that you cut the square pieces into smaller sized cheeses?

A. Yes, sir; I have learned, moreover, that by opening my curd when it was twelve hours old, if there was any pin holes or gas left in the particles of curd, I could see it, whereas if they were round cheese, I would not see it; we have made the round cheese just this process, the way we have for a great many years; the same as the square cheese.

Q. Except in cutting the curd up into these square blocks or rectangular—

A. It is a parallelopipedon in fact, but we won't be so particular.

Q. By cutting it up into these blocks it enables you to observe the character of the curd; that is the great advantage?

A. Yes, sir; that is a great advantage; the process is the same otherwise.

Q. Now, we have got the cheese in the press; state how you press it?

A. Press it very carefully and gradually, and follow it up slowly.

Q. Your theory of pressing is that you do not press calculating to press the whey out, so much as to follow up what whey there is drains out; that is your idea?

A. Yes, sir.

Q. Well, would you frequently apply a little additional pressure?

A. Yes, sir.

Q. If so, about how often?

A. About once in fifteen minutes to half an hour; but let it drain thoroughly.

Q. The whey comes from draining more than from pressing?

A. Yes, sir; because in pressing you press so hard upon the surface that you force the whey to the center.

Q. By applying sufficiently hard or severe pressure you close the openings in the surface and drive the whey to the center, and you would have cheese that would rot on the inside before you discovered anything wrong on the surface?

A. Yes, sir; and where we made 100-pound cheese there would be a vacuum; I found the same rule work well after you had cut it up and packed it and all that; if you don't drain it and put

pressure to it, the outside will close and retain the whey on the inside; in round cheese the action of the rennet will generate moisture in the cheese; in this form that whey is in there and it very soon becomes acrid and will even dissolve cast-iron; the round cheese I have to turn over end to end; if there is any moisture left in them, it percolates through, backwards and forwards, and decomposes the cheese; so that if you have a round cheese that leaks, you don't want to turn it at all until it gets through leaking; the table would be wet the way you used to make it; considerable whey when they put it in the press; now, the squares, they are laid upon the side; if there is any moisture in them, it settles from the center to the bottom. We turn it a quarter over, and it is turned at right angles, and never goes back again; the whey is eliminated the first time, and it never goes back.

Q. The rind of the old cheese, as you have stated, where they used to try to press them dry, the rind and a couple of inches would be good cheese, but the center would be decomposed by the action of the rennet?

A. Yes, sir.

Q. That is all there is of this process; how do you care for them; when do you put on the bandage?

A. The square cheese are bandaged and cut up the next morning; you see we don't put to press; we bandage and put back to press until 5 o'clock, and then put on the shelves and cure the same as other cheese; turn them a quarter over every day until they are cured.

Q. What is the evidence that they are thoroughly cured—no moisture on the shelves?

A. No, there ain't any; but we let them stand for three or four days before we put any grease on them; they are only greased once and then rubbed off with a cloth, to keep them bright; if they get very wet, we grease them again, through the season; but the round cheese you care for in the same manner that everyone does.

Q. If you will give us your experience with cheese made in this way (these square cheese); how long they will keep; how long you have kept them, and just what you know about it; how long you have kept them and still have them good cheese; have

you ever kept any long enough to spoil from age ; and if so, how long ?

A. Their keeping qualities I don't know ; we have kept them six years ; we took four years samples to the centennial at Philadelphia ; after the first six months there is no perceptible shrinkage if the cheese is dry ; if there is no moisture ; if the moisture is eliminated from the cheese.

Q. It is very likely to be eliminated so that there won't be any shrinkage ; have you weighed them and tried that ?

A. Yes, sir.

Q. Just state what you know about that ; how you have weighed them and tried to find out whether they do shrink any after six months ?

A. Well, I did weigh those that I kept six years ; weighed once a year ; I could not see any variation.

Q. Did you keep a record so you would know if there was any variation ?

A. Yes, sir.

Q. How much variation was there ?

A. Nominally, not any ; simply a trifle ; if they were weighed in a damp time, they would take in moisture from the atmosphere, and if in a dry spell they might vary a trifle.

Q. A very small fraction, not enough to be of any practical account ?

A. No.

Q. You say you have kept these cheese for six years ?

A. That is as long as I have kept them.

Q. What did you do with the six-year-old cheese ?

A. Well, I ate it and sampled it around amongst the people, and took a sample of it to the great cheese exhibition held at Utica ; I guess it was spoken of in the papers at that time ; it was perfect ; no flavor except the cheese flavor ; it probably might as well come in here as anywhere ; in a dry cheese, properly made, every other odor leaves it but just the cheesy odor.

Q. So that there is no odor or flavor but what belongs to fine cheese ?

A. There is no other odor or flavor ; the longer they are kept the less there is of these objectionable odors or flavors ; they are all gone.

Q. If you will state, without going into detail, just what efforts you have made to introduce this process among dairymen, and how you have succeeded?

A. It has been a perfect failure; the incapacity of people not knowing what cheese was has rendered it a failure; but it has been a perfect success with me, it is far ahead of what I anticipated, but with others it is a perfect failure.

Q. Others have tried it, to your knowledge, and don't succeed?

A. Yes, sir.

Q. So that it is not adopted anywhere?

A. No, I believe I am the only person making it; it is simply to supply a demand of those who want a ripe, clean flavored cheese, so that you can buy a whole cheese if you get one that you like; no two cheeses are exactly alike.

Q. You know what is called the Cheddar process, of cheese making, the one that our experts use, where they pack it and where the curd will strip; is there any reason why cheese cut in that way, or curd manipulated in that way, would not make as good cheese as these cheeses that you make, according to your method, if the curd was handled and pressed in the same way?

A. Yes, sir.

Q. Well, what do you mean by "yes;" that there is a reason why it would not make as good cheese?

A. Yes, sir.

Q. Will you state what the reason is?

A. It is kept under the action of the rennet too long, uses up the finest qualities of the milk; the highest properties are assimilated by the rennet, and put them up in this form and they become woody and tasteless and never develop their full cheese flavor; I have tried that.

Q. How many years have you been making cheese this way?

A. Nineteen years; I keep the entire season's make the season through.

Q. Until you get ready to market them?

A. Yes, sir.

Q. What season of the year do you market them?

A. November, generally.

Q. How do your prices compare with the highest prices of the best factory Cheddar cheese?

A. Well, the point is we generally calculate two cents more.

Q. Do you get two cents more?

A. Yes, yes; I get more than that; generally get that on the average; our milk last season netted the patrons, over and above all expenses, one dollar and two cents per hundred pounds. *

Q. For the year?

A. For five months.

Q. What was the matter with the other months; didn't run?

A. Yes, sir; but we can not make an old cheese in October.

Q. You can not make these square cheeses after September?

A. You can make them; but with artificial heat, the expense of curing and giving them age is large, and you can't get them so but what there is so much body to them (we make them out of full cream), that when it comes on hot weather another season, they will melt, there is so much butter in them; I have tried that.

Q. After the month of September the milk is so rich in butter fat that when it is made into cheese in this cured form, the next season, when hot weather comes on, they will melt down, no matter how dry they are?

A. Yes, sir.

Q. So that it is no particular advantage to make cheese in this way after the month of September?

A. No.

Q. From that time on, what cheese you make, you make according to the Cheddar process?

A. Yes, sir.

Q. And for that you get about the same price that other people get for theirs?

A. Yes, sir.

Q. So for nineteen years you have made cheese in this way, and have realized for all your cheese, up to the first day of October, at least two cents a pound above the market for other cheese, made in the other way, as a rule?

* Average last year was about ninety-three cents.—SMITH.

A. More than that; at least that; never less than that.

Q. Generally more?

A. Yes, sir.

Q. For the nineteen years?

A. Yes, sir; in making the round cheese, after I have finished making these square cheese for the season, I don't pack it, because my cheese-room is a little cold, and my curd, dipped into the dry vat in the way that you do up to that time, will retain the whey and will stop the action of the rennet so that the cheese has too much whey in it and will be mushy, consequently I don't pack it but cure (?) it in the whey before packing it; it is arriving at the same result, only more conveniently; we don't cure it in the whey as long; we run our heat a little higher.

Q. How high?

A. About 104°, right along up, and let it stand there; and then we calculate to have it string a little.

Q. To have it draw out a little on the hot iron?

A. Yes, sir.

Q. About how much do you let it draw out, an inch or two?

A. About a quarter to a half an inch on the hot iron.

Q. You say that this condition, when the curd applied to the hot iron will string out, is not due to acidity?

A. It may be if the milk is poor, but it will string coarser.

Q. It is not necessarily due to acidity, because a sour cheese will be a sour cheese?

A. Yes, sir.

Q. And this stringing out when the curd is applied to the hot iron, when the curd is in proper condition, is due to what?

A. Due to the action of the rennet converting into albumen after the whey is drawn out, in a thick state; it is not so reduced as it is first along; its own cohesive force will press it together; then this albumen is produced in that state; it is broke down, and that is just as far as you can carry it; you carry it a little further, and it will mush right through your hand, and you can not get the whey out of it; you see this, if it was acidity, sour, then the rennet action is checked, and then you get a poor, mealy, dry thing.

Q. If it were acidity, the digestion would be checked, and you would have a poor cheese at best ; but it is not acidity at all ; it is simply thickening of the albumen in the process of digestion by the action of the rennet in the calf's stomach ?

A. It attempts to act upon the mass ; these chunks lay in the stomach a long while.

Q. Until the albumen is so thickened it will draw out ?

A. Yes, sir ; on that point, they get at the same result, only they get a cheese which has a little acidity ; they try to get a good result, but I have seen some very poor cheese.

Q. You sum up the whole matter of cheese making as being simply digestion of the milk as it is performed, as near as possible, in the first stomach of the calf ; and the nearer you can approach to that the more perfect your cheese is ?

A. You want to use as little rennet as you can ; you want to have the cheese under your control, so you can get a good cheese ; you push in rennet enough, or too much rennet rather, and that spoils the flavor of your cheese, and it goes along too fast for your ability to keep up with it.

Q. The object you are aiming at is to produce the same result as that produced in the stomach of the calf, and the nearer you approach that the more perfect the cheese.

A. I don't say that ; because that may lay there so long it won't have any butter in it ; to produce one of these fine cheese we have got to have the finest properties of the milk retained in the curd ; and they are not retained in the curd in the calf ; they go into the circulation and are eliminated ; if we take out all that we have only got just the waste ; if the cheese is dry and the oil is changed by the action of the rennet into this dry powder, and is retained in the body of the cheese, and has not been lost by evaporation or otherwise ; it takes oils and such things to make gas ; the cheese are always giving off an odor ; when they give off a very gaseous or offensive odor the cheese is growing riper very fast ; but when you cure them in the whey, so far as to use up these vapors, they are gone before it is made into cheese ; we have carried it so far as to get the moisture out in the whey, and no further ; but they never will hold the same amount ; even

the same quality of milk will not hold exactly the same amount of cheese properties ; this cheese is not suitable for weak stomachs until it has lost that oily appearance, until the butter fat is acted upon, to be soluble ; that cheese is soluble in water.

Q. Fresh made cheese is not soluble in water?

A. No, sir ; until the cheese is old enough so that the process of digestion has been carried far enough so that the butter fats have been digested and taken a dry granular form, the cheese taken into the human stomach will only aid in digesting the other articles in the stomach, and all the digestive qualities of the new cheese will go out from the cheese and help digest the other articles in the stomach, and the cheese will remain there and be hard to get rid of ; the cheese is best to eat when it is so old that the process of digestion has been continued so far that the butter fats have all been digested and taken a dry granular form in the cheese.

COMPOSITION OF THE HOLDRIDGE CHEESE.

	Water, per cent.	Fat, per cent.	Caseine, per cent.	Ash, per cent.	Made in—	Analyzed.
Sample No. 1	13.24	45.80	36.56	4.40	September, 1888	November 19, 1888
Sample No. 2	16.43	41.63	36.16	5.78	May, 1888	November 19, 1888
Sample No. 3	9.01	44.21	42.24	4.54	June, 1888	November 19, 1888
Sample No. 4	20.83	39.68	35.67	4.82	May, 1888	November 19, 1888
Sample No. 5	11.40	44.21	39.86	4.53	August, 1888	November 19, 1888
Sample No. 6	13.10	42.17	40.38	4.35	July, 1888	November 19, 1888

It will be observed that these cheese were dry and highly salted. Their quality was good ; their flavor varied considerably, but had no taint of decay ; their texture was firm and meaty and contained no gas-holes.

The following two samples are what is known as "night skim ;" that is, they are made of the skimmed night's milk mixed with the whole morning's milk. They were made under the Cheddar process :

	<i>Sample No. 1.</i>	Per cent.
Water		36.07
Fat		19.62
Caseine		40.49
Ash		3.82

<i>Sample No. 2.</i>		Per cent.
Water		39.95
Fat		13.10
Caseine		43.32
Ash		3.63

No. 1 was made October 20, 1888, therefore partly cured. No. 2 was made November 8, 1888, therefore green. Both were made at the Sterling factory, Frankfort, N. Y.

The following is the composition of cheese made under the different systems, given in tabular form:

TABLE 1—ANALYSES OF CANADA CHEESE AND WHEY.

Sample number.	WHERE MADE.	When made.	Process.	Water per cent.	Fat per cent.	Caseine, etc., per cent.		Ash, per cent.	When analyzed.	Remarks.
1	Ontario, Canada....	1888. Sept. 15	Time system..	32.38	20.59	43.52		3.51	1888. Oct. 24	Made at Dunkeel factory. Cured cheese.
2	Ontario, Canada....	Oct. 25	Time system..	35.46	24.60	36.39		3.55	Oct. 26	Made at Dunkeel factory. Green cheese.
3	Listwell, Canada....	Aug. 20	Time system..	33.17	23.09	40.29		3.45	Oct. 26	Made at Listwell factory. Cured cheese.
4	Listwell, Canada....	Sept. 15	Time system..	32.28	22.24	42.15		3.33	Oct. 24	Made at Listwell factory. Cured cheese.
5	Napanee, Canada....	Sept. 15	Time system..	35.36	20.17	41.19		3.28	Oct. 24	Made at Napanee factory. Cured cheese.
6	Napanee, Canada....	Aug. 15	Time system..	33.33	21.90	41.50		3.27	Oct. 24	This was from a cheese weighing 1,000 pounds.
7	Belleville, Canada..	Sept. 18	Time system..	36.28	24.79	36.79		3.14	Oct. 27	Made at Belleville factory. Cured cheese.
8	Listwell, Canada....	Sept. 13	Time system..	34.28	24.13	41.94		3.65	Oct. 27	Made at Listwell factory. Cured cheese.
9	Gananoque, Canada.	Sept. 15	Time system..	33.35	21.25	41.80		3.60	Oct. 27	Made at Gananoque factory. Cured cheese.
10	Gananoque, Canada	Sept. 20	Time system..	32.30	23.53	40.87		3.30	Oct. 27	Made at Gananoque factory. Cured cheese.
11	Gananoque, Canada	July, '87	Time system..	36.58	25.67	33.82		3.93	Oct. 27	Made at Gananoque factory. Over one year old.
						Sugar.	Lactic acid.			
		1888. Oct. 22	Time system..	93.39	0.287	5.583	0.45	0.29	Oct. 26	Analyses of whey made at Allen Grove combination factories.

TABLE 2—ANALYSES OF CHEESE AND WHEY (CHEDDAR).

Sample number.	WHERE MADE.	When made.	Process.	Water, per cent.	Fat, per cent.	Casoline, etc, per cent.	Ash, per cent.	When analyzed.	Remarks.
1	Verona, N. Y.....	1888. Sept. 11	Cheddar	37.08	28.72	30.45	3.75	1888. Sept. 14	This was very green and made from a "floating curd."
2	Verona, N. Y.....	Sept. 11	Cheddar	33.30	33.02	30.19	3.49	Sept. 14	From a perfect curd qualities little better than No. 1.
3	Verona, N. Y.....	Sept. 11	Cheddar	36.90	27.45	31.92	3.73	Oct. 26	Analyzed forty-five days after it was made; a cured cheese.
4	Hall's factory	Oct. 20	Cheddar	34.95	25.83	36.54	3.18	Oct. 24	Green cheese.
5	Hall's factory	Sept. 12	Cheddar	35.90	25.85	34.56	3.69	Oct. 24	Cured cheese.
6	Heuvelton factory..	Sept. 24	Cheddar	33.04	25.18	38.36	3.42	Oct. 24	Partly cured cheese.
7	Heuvelton factory..	Sept. 19	Cheddar	34.46	26.93	35.29	3.82	Oct. 24	Green cheese.
8	Spragueville, N. Y..	Sept. 20	Cheddar	35.67	23.95	37.33	3.05	Oct. 31	Cured cheese.
9	Steele Corn'rs fact'y, Kinsman, prop....	Sept. 12	Cheddar	35.98	25.59	35.23	3.21	Oct. 31	Cured cheese.
10	Hallsboro, N. Y., Parks Bros.....	Sept. 25	Cheddar	36.34	25.83	34.67 Sugar, etc.	3.16	Oct. 31	Cured cheese.
1	Verona, N. Y.....	Sept. 11	Cheddar	93.62	0.14	5.80	0.44	Sept. 14	Whey from cheese No. 1, made at Verona, N. Y.
2	Heuvelton factory..	Oct. 20	Cheddar	93.34	0.16	6.19	0.31	Oct. 24	Whey from cheese Nos. 6 and 7.
3	W. W. Hall's	Oct. 20	Cheddar	93.47	0.059	5.801	Lactic acid. 0.34 Ash. 0.33	Oct. 24	Whey from cheese Nos. 4 and 5.

TABLE 3—ANALYSES OF STIRRED CURD PROCESS (CHEESE).

Sample number.	WHERE MADE.	When made.	Process.	Water, per cent.	Fat, per cent.	Caseine, etc. per cent.	Ash, per cent.	When analyzed.	Remarks.
1	Rynex Corners, N. Y.....	1888. Sept. 27	Stirred curd...	35.68	33.30	27.56	3.46	1888. Sept. 28	This sample came from Princetown dairy; green cheese.
2	Norwich, N. Y.....	Oct. 10	Stirred curd...	17.41	41.36	37.13	4.10	Oct. 11	This sample came from Smith & Boyd's factory; green cheese.
3	Norwich, N. Y.....	Oct. 17	Stirred curd...	36.37	32.42	28.34	2.87	Oct. 19	This sample came from Smith & Boyd's factory; green cheese.
4	Oxford, N. Y.....	Oct. 16	Stirred curd...	41.35	27.02	28.53	3.10	Oct. 19	Green cheese.
5	Gouverneur factory, N. Y..	Oct. 13	Stirred curd...	35.35	25.28	36.10	3.27	Oct. 22	Green cheese.
6	Gouverneur factory, N. Y..	Sept. 15	Stirred curd...	32.98	23.57	40.14	3.31	Oct. 22	Cured cheese.
7	South Gouverneur, N. Y....	Oct. 18	Stirred curd...	32.84	29.77	33.27	4.12	Oct. 22	Green cheese.
8	South Gouverneur, N. Y....	Sept. 15	Stirred gurd...	33.79	28.43	34.38	3.40	Oct. 22	Cured cheese.
9	Crystal Springs factory, Gouverneur, N. Y.....	Oct. 18	Stirred curd...	37.79	30.37	28.15	3.69	Oct. 22	Green cheese.
10	Crystal Springs factory, Gouverneur, N. Y.....	Sept. 21	Stirred curd...	33.05	23.15	40.20	3.60	Oct. 22	Cured cheese.

TABLE 4—ANALYSES OF WHEY, BY STIRRED CURD PROCESS.

Sample.	WHERE MADE.	When made.	Process.	Water, per cent.	Fat, per cent.	Sugar, little ca- seine, albumen and lactic acid, per cent.	Ash, per cent.		When analyzed.	Remarks.
1	Rynex Corners, N. Y.	1888. Sept. 27	Stirred curd.	93.94	0.21	5.45	0.40		1888. Sept. 28	This sample is from cheese No. 1, Table 3, Princeton dairy.
2	Norwich, N. Y.....	Oct. 10	Stirred curd.	93.24	0.88	5.51	0.37		Oct. 12	This sample is from cheese No. 2, Table 3, Smith & Boyd's factory.
3	Norwich, N. Y.....	Oct. 16	Stirred curd.	93.50	0.10	6.05	0.35		Oct. 19	This sample is from cheese No. 3, Table 3, Smith & Boyd's factory.
4	Oxford, N. Y.....	Oct. 10	Stirred curd.	93.14	0.32	6.16	0.38		Oct. 12	This sample is from cheese No. 4, Table 3.
5	Oxford, N. Y.....	Oct. 16	Stirred curd.	93.08	0.27	6.30	0.35		Oct. 19	This sample is from cheese No. 4, Table 3.
6	South Gouverneur, N. Y...	Oct. 18	Stirred curd.	93.07	0.099	6.171	0.66		Oct. 24	This sample is from cheese No. 7, Table 3.
7	Crystal Springs factory, Gouverneur, N. Y.....	Oct. 18	Stirred curd.	93.30	0.19	5.73	Lactic acid. 0.39	Ash. 0.34	Oct. 24	This sample is from cheese No. 9, Table 3.

The following experiments on the solubility of cheese were made :

These experiments were made for the purpose of comparing the solubility of the cheese made under the different processes. As each sample was placed under similar conditions, it is fair to assume that the results represent their comparative solubility, and should not be taken as an exponent of their digestion in the stomach, for the conditions are not at all like the stomach digestion. By increasing the amount of acid the samples could be made to dissolve very quickly. Then, too, in the stomach some of the fat undergoes disintegration, setting free fatty acids, which we believe is important in the process of digestion, and many other conditions of stomach digestion are not complied with.

In the first trial the digestive fluid was composed of one grain of Park, Davis & Co.'s "Pepsinum purum lamellis," one minum or drop of concentrated hydrochloric acid and two drams of distilled water ; into this was put five grains of the sample of dry cheese, after having been forced through a wire sieve with sixty meshes to the inch.

The whole was contained in a tubular vial, well stoppered and kept into an oven whose temperature ranged from 100° to 105° Fahr.

All the samples were placed under exactly the same conditions, except with the stirred curd, where the acid for the first six hours was but 0.1 per cent, after which time 1.0 per cent was added.

As will be seen by the table below (Table 5), the one-year-old Canada cheese dissolved in seven hours ; none of the other five were completely dissolved at the end of twenty-four hours.

One of the seven full Cheddars was dissolved at the end of ten hours ; three at the end of twenty-two hours, and three at the end of twenty-four hours.

The two skim Cheddars were not nearly clear at the end of forty-eight hours.

Of the six stirred curd, one was clear at the end of six hours after acid was added or twelve hours altogether ; one was clear at the end of fourteen hours after the acid was increased, or twenty hours altogether ; and two at the end of twenty-four hours after acid, or thirty hours altogether. The other two were not clear at the end of thirty hours.

Of the six Holdridge samples, one was clear in six hours, two were clear at the end of eighteen and one-half hours, and three at the end of twenty-five hours, though one of them was not quite a perfect solution.

In the second trial the liquid was composed of two grains of the same pepsin, three drams of water and one drop of acid, into which four grains of cheese were placed; the other conditions were the same.

From table 8 it will be seen that of the seven Canada cheese one was dissolved at the end of twelve hours. This was the only green cheese among the Canada samples. (This was not taken in the first trial.) The old Canada cheese was clear at the end of twenty-three hours, but none of the others were nearly clear at that time.

Of the seven full Cheddars, one was clear at the end of nine hours, and two were clear at the end of twenty-three hours; the other four were not quite clear at that time.

The two skim Cheddar cheese (Table 7) were not nearly dissolved at the end of forty-eight hours.

Of the six stirred curd (Table 7), one was about dissolved at the end of twenty-three hours and two were nearly so; none of the others were dissolved at that time.

Of the six Holdridge cheese, one was clear at the end of fifteen hours, one was dissolved at the end of twenty-three hours and the other three were not quite dissolved at the end of twenty-three hours; none were as perfectly dissolved as the first one above mentioned.

TABLE 5 — SOLUBILITY OF CHEESE.

Sample number.	WHERE MADE.	When made.	Process.	Condition after being acted upon by the digestive fluid, four and one-half hours.	Condition after being acted upon by the digestive fluid, six hours.	Condition after being acted upon by the digestive fluid, seven hours.
1	Allen Grove Combination, Can.	*July, '87	McPherson's.	Clear.	.....	Perfect solution.
2	.....	1888.	.....	.....	.....	.....
3	.....	Sept. 18	.....	Not clear	Not clear	Nearly clear.
4	.....	Aug. 16	McPherson's.	Not clear	Not clear	Nearly clear.
5	.....	Aug. 20	.....	Not clear	Not clear	Nearly clear.
6	.....	Sept. 18	.....	Not clear	Not clear	Nearly clear.
7	.....	Sept. 20	.....	Not clear	Not clear	But little advanced.
8	.....	.....	.....	.....	.....	.....
1	W. W. Hall's factory	Oct. 20	Cheddar	Nearly clear.	Eight hours.	Ten hours.
2	Heuvelton factory	Sept. 24	Cheddar	Nearly clear.	A little nearer clear.	Just short of clear.
3	W. W. Hall's factory	Sept. 12	Cheddar	Better solution than the above.	A little nearer clear.	Just short of clear.
4	Heuvelton factory	Oct. 19	Cheddar	Better solution than the above.	Clearer than the above.	Clear.
5	J. F. Hodgkins, Spragueville factory	Sept. 20	Cheddar	Not clear, but well advanced.	Clearer than the above.	Just short of clear.
6	.....	.....	.....	.....	Six hours.	Ten and one-half hrs.
7	Emery Kinsman, Steele Corners factory	Sept. 12	Cheddar	Not so clear as 5 or 7.	More advanced.	Not quite clear, but still advanced.
8	Parks Bros., Hallsboro, N. Y.	Sept. 25	Cheddar	Not so clear as 5, clearer than 6.	.....	.....
1	Sterling factory, Frankfort	Oct. 20	Skim cheese, Cheddar	Hardly any change.	Not clear, but more advanced than 5.	.....
2	Sterling factory, Frankfort	Nov. 8	Skim cheese, Cheddar	Hardly any change.	Slightly dissolved.	A little more dissolved.

* One year old.

† One thousand pound cheese.

TABLE 5 — (Continued).

Sample number.	WHERE MADE.	When made.	Process.	Condition, ten hours.	Condition, twenty-four hours.	Remarks.
1	Allen Grove Combination, Can.	*July, '87	McPherson's.....	.....	.....	Cured cheese, over one year old.
2	Napanee, Canada.....	1888.				
3	Allen Grove Combination, Can.	Sept. 15	.....	Just short of clear.....	Just short of clear.....	Cured cheese.
4	Listwell, Canada.....	†Aug. 15	McPherson's.....	Nearly clear.....	Just short of clear.....	Cured cheese.
5	Belleville, Canada.....	Aug. 20	.....	Nearly clear.....	Just short of clear.....	Cured cheese.
6	Allen Grove Combination, Can.	Sept. 18	.....	Nearly clear.....	Just short of clear.....	Cured cheese.
		Sept. 20	.....	Not nearly clear	Not clear	Cured cheese.
1	W. W. Hall's factory.....	Oct. 20	Cheddar .....	.....	Twenty-four hours.	Green cheese.
2	Heuvelton factory.....	Sept. 24	Cheddar .....	.....	Clear, but not as perfect as No. 1.....	Cured cheese.
3	W. W. Hall's factory....	Sept. 12	Cheddar .....	.....	Same as No. 2.....	Cured cheese.
4	Heuvelton factory.....	Oct. 19	Cheddar .....	.....		Green cheese.
5	J. F. Hodgkins, Spragueville factory.....	Sept. 20	Cheddar	Nineteen hours. Trifle short of clear ..	Twenty-two hours. Clear.....	Cured cheese.
6	Emery Kinsman, Seele Corners factory.....	Sept. 12	Cheddar	Not quite clear.....	Clear.....	Cured cheese.
7	Parks Bros., Hallsboro, N. Y....	Sept. 25	Cheddar	Not quite clear, but more than No. 6.....	Is better all through than No. 6.....	Cured cheese.
1	Sterling factory, Frankfort.....	Oct. 20	Skim cheese, Cheddar	.....	Very imperfect at end of 48 hours; not all dissolved	Green cheese.
2	Sterling factory, Frankfort....	Nov. 8	Skim cheese, Cheddar	.....	Very imperfect at end of 48 hours; not all dissolved	Green cheese.

* One year old.

† One thousand pound cheese.

TABLE 6—But .01 per cent of acid was used for first six hours, when 1 per cent was added.

Number on bottle.	WHERE MADE.	When made.	Process.	Condition six hours with .01 per cent.	Condition four hours after acid was increased 1 per cent.	Condition six hours after acid was increased 1 per cent.
1.....	A. W. Overacker, Gouverneur factory	1888, October 18	Stirred curd.	But little change.	Nearly clear.	Clear.
2.....	A. W. Overacker, Gouverneur factory	September 18	Stirred curd.	But little change.	Not nearly as clear as No. 1.	Not clear.
3.....	W. E.	September 21	Stirred curd.	But little change.	Not clear.	Not clear.
4.....	C. W.	October 1	Stirred curd.	But little change.	Not clear.	Not clear.
5.....	W. E.	October 18	Stirred curd.	But little change.	Not quite as clear as No. 1.	Not quite clear.
6.....	C. W. Overacker, South Gouverneur factory	September 15	Stirred curd.	But little change.	Not clear.	Not clear.
1.....	Holdridge	August	Holdridge	Not clear	Six hours. Not clear, but well advanced.	Eight and one-half hours. Nearly clear.
2.....	Holdridge	July	Holdridge	Not clear	Not clear, but well advanced.	Clearer than No. 1.
3.....	Holdridge	September	Holdridge	Nearly clear.	Clear	Clearer than No. 1.
4.....	Holdridge	May	Holdridge	Not clear	.....	Clearer than No. 1.
5.....	Holdridge	June	Holdridge	Not clear	.....	Clearer than No. 1.
6.....	Holdridge	May	Holdridge	The least advanced	.....	Not quite so clear as Nos. 2, 4 and 5.

TABLE 6—But .01 per cent of acid was used for first six hours, when 1 per cent was added.—(Continued).

Number on bottle.	WHERE MADE.	When made.	Process.	Condition fourteen hours after acid was increased 1 per cent.	Condition twenty-four hours after acid was increased 1 per cent.	Condition twenty-five hours after acid was increased 1 per cent.	Remarks.
1.....	A. W. factory.....	1888.	Stirred curd.	Not clear.....	Not clear.....	.....	Green cheese.
2.....	A. W. factory.....	Oct. 13	Stirred curd.	Not clear.....	Little more clear than No. 2.	.....	Cured cheese.
3.....	W. E. factory.....	Sept. 21	Stirred curd.	Not quite clear..	Clear.....	.....	Cured cheese.
4.....	O. W. Overacker, 8 th Gouverneur factory	Oct. 1	Stirred curd.	Not as clear as No. 3.	Clear.....	.....	Partly cured.
5.....	W. E. Smith, Crystal Springs factory.....	Oct. 18	Stirred curd.	Clear.....	Clear.....	.....	Green cheese.
6.....	O. W. Overacker, 8 th Gouverneur factory	Sept. 18	Stirred curd.	Not quite clear..	Clear.....	.....	Cured cheese.
1.....	Holdridge	Aug. —	Holdridge	Fifteen hours. Not as clear as Nos. 4 and 5.	Eighteen and one-half hours. Almost, but not so clear as Nos. 4 and 5.	Clear; next best to No. 3.	.....
2.....	Holdridge	July —	Holdridge	Not as clear as Nos. 4 and 5.	Almost, but not so clear as Nos. 4 and 5.	Next to No. 1	Cured cheese.
3.....	Holdridge	Sept. —	Holdridge	Trifle short of clear.	Clear.....	Next best to No. 2	Cured cheese.
4.....	Holdridge	May —	Holdridge	Not so clear as the rest.	Not as clear as the rest.	Poorrest.....	Cured cheese.
5.....	Holdridge	June —	Holdridge	Trifle short of clear.	Clear; next to No. 4.	.....	Cured cheese.
6.....	Holdridge	May —	Holdridge	Trifle short of clear.	Clear; next to No. 4.	.....	Cured cheese.

TABLE 7 — TRIAL SECOND.

Sample number.	WHERE MADE.	When made.	Process.	Condition at the end of three hours.	Condition at the end of five hours.	Condition at the end of seven hours.
1	Sterling fact'y, Frank-	1888.	Skimmed, Cheddar.	Hardly any change	But little change	But little change.
2	fort, N. Y.	Oct. 20	Skimmed, Cheddar.	Hardly any change	But little change	But little change.
3	A. W. Overacker, Gouv-	Nov. 9	Stirred curd	Some change more than in the others.	Well advanced	Little more ad-
4 .....	.....	Oct. 13	Stirred curd	Some change more than in the others.	Not quite so far as 3.	vanced. Not so much.
5 .....	.....	Sept. 15	Stirred curd	Some change more than in the others.	Not so far as 4.	Same as 3.
6 .....	.....	Sept. 21	Stirred curd	Some change more than in the others.	Almost same as 4.	Same as 3.
7 .....	.....	Oct. 1	Stirred curd	Some change more than in the others.	Little further than 6 & 8.	Same as 3.
8 .....	.....	Oct. 18	Stirred curd	Some change more than in the others.	About same as 4.	About same as 4.
9	Gouverneur	Sept. 16	Stirred curd	Some change more than in the others.	Very little ch'ge from last	Some advanced.
1	Holdridge	Aug. —	Holdridge	Hardly any change	Very little ch'ge from last	Some advanced.
2	Holdridge	July —	Holdridge	Hardly any change	Very little change from last	More advanced than No. 2.
3	Holdridge	Sept. —	Holdridge	Little more advanced than Nos. 1 and 2.	Very little ch'ge from last	Some advanced.
4	Holdridge	May —	Holdridge	Hardly any change	Very little ch'ge from last	Some advanced.
5 .....	.....	June —	Holdridge	Hardly any change	Nearly clear	Little more clear.
6 .....	.....	May —	Holdridge	Quite well advanced		

TABLE 7—(Continued).

Sample number.	WHERE MADE.	When made.	Process.	Condition at the end of nine hours.	Condition at the end of twelve hours.	Condition at the end of fifteen hours.	Condition at the end of twenty-three hours.
1	Sterling factory, Frankfort, N. Y.	1888. Oct. 20	Skimmed, Cheddar.	Very little advanced.	Very little advanced.	A very little further advanced.	Considerably advanced.
2	Sterling factory, Frankfort, N. Y.	Nov. 8	Skimmed, Cheddar.	Very little advanced.	Very little advanced.	A very little further advanced.	Considerably advanced.
3	A. W. Overacker, Gouverneur	Oct. 13	Stirred curd	About one-half dissolved.	About three-quarters dissolved.	A little advanced from last.	About three-quarters dissolved.
4 .....	.....	Sept. 15	Stirred curd	Not so much as 3.	Not quite so much as 3.	More than 3.	Little more dissolved than 3.
5 .....	.....	Sept. 21	Stirred curd	About same as 3.	Nearly clear.	Almost clear.	Just short of clear.
6	C. W. Overacker, South Gouverneur.	Oct. 1	Stirred curd	About same as 3.	Not so clear as 5.	Not so clear as 5.	Not quite so clear as 5.
7	W. E. Smith, Crystal Springs	Oct. 18	Stirred curd	About same as 3.	Same as 5.	About same as 5.	Not quiet so clear as 5.
8	C. W. Overacker, South Gouverneur	Sept. 15	Stirred curd	Not quite as far as 4.	Least of any.	Poorest.	Poorest.
1	Holdridge	Aug. —	Holdridge	Well advanced.	Almost clear.	Clear.	Almost clear.
2	Holdridge	July —	Holdridge	Not quite so much as 1.	Not nearly so much as 1.	Much clearer than last time.	Clear.
3	Holdridge	Sept. —	Holdridge	Nearly clear.	Better than 2, not so good as 1.	Nearly clear.	Clear.
4	Holdridge	May —	Holdridge	Not quite so clear as 3.	Not so good as 3.	About same as 3.	Not so clear as No. 3.
5 .....	.....	June —	Holdridge	About the same as 4.	Better than 3, not so good as 1.	About same as 2.	Just short of clear.
6 .....	.....	May —	Holdridge	Well advanced.	About the same as No. 5.	About same as 2.	Just short of clear.

TABLE 8—TRIAL SECOND.

Sample number.	WHERE MADE.	When made.	Process.	Condition at the end of three hours.	Condition at the end of five hours.	Condition at the end of seven hours.
1	Allen Grove Comb., Canada.	Oct. 21, 1888	McPherson	Well advanced toward digestion.	Little nearer advanced.	Nearly clear.
2	Latwell, Canada	Aug. 20, 1888	McPherson	But little advanced.	But little advanced.	But little further advanced.
3	Napanee, Canada	Sept. 15, 1888	McPherson	Considerably more advanced.	But little advanced.	More advanced.
4	Allen Grove Comb., Canada.	Aug. 15, 1888	McPherson (1,000-pound cheese).		But little advanced.	More advanced.
5	Allen Grove Comb., Canada.	July —, 1887	McPherson (one year old).	Next to No. 1	But little advanced.	More advanced.
6	Belleville, Canada	Sept. 18, 1888	McPherson	About the same as No. 4.	Poorest of the lot	About the same as Nos. 4 and 5.
7	Allen Grove Comb., Canada.	Sept. 20, 1888	McPherson	About the same as No. 4.	Poorest of the lot	About the same as Nos. 4 and 5.
8		Oct. 20, 1888	Cheddar	Little changed.	Well advanced.	Further advanced.
9	J. C. Birge.	Sept. 24, 1888	Cheddar	Little changed.	Very imperfect	Advanced slightly.
10		Sept. 12, 1888	Cheddar	Little changed.	Same as No. 1.	Not as far as No. 1.
11	....., N. Y.	Oct. 19, 1888	Cheddar	Well advanced.	The farthest advanced of any.	The most.
12	J. F. Hodgkin, proprietor	Sept. 20, 1888	Cheddar	Well advanced.		About one-half dissolved.
13	Steel's Corners factory, E. Kinman, proprietor.	Sept. 12, 1888	Cheddar	Not so far advanced as 12.		Little more than 12.
14	Parks Bros., Hallsboro, N. Y.	Sept. 25, 1888	Cheddar	Not so far advanced as 12.		Almost clear.

TABLE 8—(Continued).

Sample number.	WHERE MADE.	When made.	Process.	Condition at the end of nine hours.	Condition at the end of twelve hours.	Condition at the end of fifteen hours.	Condition at the end of twenty-three hours.
1	Allen Grove Comb., Canada.	Oct. 21, 1888	McPherson	Just short of clear.	Clear	Clear .....	.....
2	Idetwell, Canada	Aug. 20, 1888	McPherson	Consider'ly advanced.	About the same as at 9 hours.	But little advanced.	Not nearly clear.
3	Napanee, Canada	Sept. 15, 1888	McPherson	Well advanced.	Same as No. 2 ...	But little advanced.	A little more clear than No. 2.
4	Allen Grove Comb.	Aug. 15, 1888	McPherson (1,000-pound cheese).	Well advanced.	Not quite as clear as No. 2.	Not quite so clear as No. 2.	Not nearly clear.
5	Comb.	July —, 1888	McPherson (one year old).	Next to No. 1 ...	Not quite clear.	Just short of clear.	Clear.
6	Belleville, Canada	Sept. 18, 1888	McPherson	About same as No. 4.	Poorer than any of the above.	Poorer than any above.	Not clear.
7	Allen Grove Comb., Canada.	Sept. 20, 1888	McPherson	About same as No. 4.	About the same as No. 4.	Poorer than any above.	Poorer.
8	W. W. Hall's factory	Oct. 20, 1888	Cheddar	Nearly clear	Almost clear	Just short of clear.	Not quite clear.
9	Heuvelton factory, J. C. Birge, proprietor.	Sept. 24, 1888	Cheddar	Not so clear as No. 8.	Not quite so clear as No. 2.	About same as No. 4.	Clear.
10	W. W. Hall's factory	Sept. 12, 1888	Cheddar	Not so clear as No. 8.	Not quite so clear as No. 2.	Not so good as 9.	Not quite clear.
11	J. C. Birge, Heuvelton, N. Y.	Oct. 19, 1888	Cheddar	Clearer than 9 and 10.	Not quite so clear as No. 2.	Almost clear ...	Clear.
12	J. F. Hodgkin, proprietor.	Sept. 20, 1888	Cheddar	Almost clear	But little advanced beyond last.	17 hrs. and so min. advanced.	Imperfectly dissolved.
13	Steel Corners factory, E. Kinsman, proprietor.	Sept. 12, 1888	Cheddar	Almost clear	Little more advanced.	Not quite so much advanced as No. 8.	Not quite clear.
14	Park Bros., Hallaboro, N. Y.	Sept. 26, 1888	Cheddar	Clear .....	.....	.....	.....

THE CARE OF MILK.

Much has been and is being written and said upon the subject of handling milk to be made into butter and cheese, yet gross negligence or ignorance in regard to it is the prevailing practice.

The importance of properly handling milk can not be too strongly or too often urged upon the mind of the producer. The principles underlying the subject have been but little studied, and consequently but little is known about them. We will endeavor to set forth those principles so far as they are known as we proceed.

The thorough aeration of milk has been shown by practice to be the most effective means of preventing "taints," which is the great antagonist of modern cheese-makers, and it is also the cause of a large proportion of bad cheese. Out of fifty-two or fifty-three cheese factories we visited the season just past, all but one had been troubled more or less with "tainted milk."

In one factory it had been so great as nearly to ruin the sale of the cheese. It was generally the milk of certain patrons that was "tainted," and we took special pains to ascertain whether they aired their milk, and found that none of them did. They usually put the evening's milk into a closed can. On the other hand in those factories to which the milk was delivered twice a day, the night's milk placed into an open vat and stirred with a dipper, there was little complaint of "tainted milk," and we believe there would have been much less had the sanitary conditions of the factory been perfect.

And right here we want to allude to a deprecable evil, the great rivalry existing between certain cheese factories for the patronage of the surrounding farmers. Milk known to be tainted will be taken and used rather than refuse it and offend the patron who would be gladly received by the rival factory. This state of things is doing much harm to the cheese industry in some localities.

We have given much thought to the subject of "tainted" milk and, though it is environed with much uncertainty and complexity, we believe that there are different influences at work to produce it acting both before and after the milk is drawn, and a study of these will explain the *modus operandi* of aerating. We

are well convinced that there are different taints, and that the most of them are due to fermentative and putrefactive changes in the milk.

Though it has been demonstrated that milk does not contain the germs of fermentation or putrefaction while in the cows udder, yet it quickly becomes infested with them in its passage through the air to the pail, from the pail itself, from the outside of the udder, etc.

Experience goes to show that putrefaction is but a kind of fermentation. Under normal conditions the kind of fermentation which first develops in milk is lactic, or in other words, the kind of bacteria which finds the most favorable conditions for its development in healthy milk, are those which constitute the active agent in bringing about the formation of lactic acid.

Now, under abnormal conditions, which will be more particularly mentioned further on, the bacteria which give rise to putrefaction are developed; or it may be the action of the lactic acid germ itself is so modified as to bring about the same result. We have analogies in the action of the acetic ferment.

In order for the development of acetic acid in a liquid containing the proper elements, as cider, it is necessary that the ferment be supplied with oxygen, for when it is submerged a different action takes place, instead of producing acetic acid it then destroys it.

Then again, we see during acetic fermentation when the composition of the liquid is properly changed, the development of another germ or ferment, "the flowers of wine," whose action is very different from that of the acetic ferment, it wholly consumes both the alcohol and acetic acid, and in order to prevent it, the growth of the acetic germ must be hastened.

Hence, it is easy to understand how the action of the lactic ferment may be unfavorably modified by closing it up from the air in warm milk. And, also, how it may be smothered by the development of other germs when the constitution of the milk is favorable.

In our opinion the most important factor in the production of "tainted" milk is the condition of the cow. All the elements of milk except the water is transformed material from the blood of the animal.

This transformation is the work of the udder itself, under the direct influence of the nervous system, and where the function is disturbed or improperly performed, the transformation of part of these materials, at least, is incomplete, rendering the product very unstable, quick to undergo decomposition and to form new compounds, thus changing the composition of the fluid which must affect the action and development of germs.

There are always volatile substances in milk which give rise to the animal odors and if retained in warm milk soon impart a disagreeable smell and taste to it. These probably represent the waste and imperfect products of the process of secretion.

Now, by thorough aeration these unstable elements are partly mechanically removed and partly oxidized into innocuous substances. The action of the air does not cease with the passage of the milk through it; for milk is capable of containing a considerable amount of air as may be demonstrated by floating a lactometer in a given milk after standing at rest awhile, then floating it again after the milk has been thoroughly agitated with air, when it will be found to show many degrees lighter. It may be made to show over 100° lighter.

Then again, the watery element, as before stated, is the one which comes directly from the blood through a kind of filtering process and if holding in solution injurious matter, could bring it into the milk.

The injurious effect of foul water and food is thus explained; and the importance of the most gentle treatment, care, feed, water, etc., of dairy cows is made manifest. The milk of a cow fretted and worried by dogs or any cause, or one allowed to go hungry and thirsty, or given improper food is always liable to be "tainted."

Last summer we saw several instances like the following: A herd of cattle was brought, during the early evening, from the pasture field into the barn-yard. The pasture field, owing to the long drought prevailing at that time, probably contained no water. Upon reaching the yard they ran pell-mell for the water trough. There not being room for them all, the "master cows" only reached it. They showed their intense thirst by thrusting their heads up to the eyes into the water. Before those that were crowded out, half quenched their thirst, some actually getting no

water at all, the "man," so called, sent the dog out and drove them in. One would be safe in predicting "tainted" milk from those cows.

Cooling milk is another important object to be attained; its benefit is two-fold; first, to retard the growth of germs; and, second, to retain the carbonic acid gas which is normally contained in fresh milk, and is evolved in the udder by the vital process of secreting milk.

It is a well-known fact that ferments are most active at a temperature of from 95° to 100° Fahr., and their activity is lessened as the temperature goes below this till it ceases altogether, at and near the freezing point. Another established fact is, and, so far as we know, no attention has been paid to this before, that carbonic acid gas has the power to paralyze bacteria. Milk retaining its natural heat soon expels this gas, but retains much of it if kept cold.

Milk should be cooled as soon as possible after being drawn, especially in hot weather, and should be aerated at the same time. If it is not aerated at the time of cooling, much of the "animal odors" will be retained.

With milk intended to be made into cheese, especially when the weather is cool, the temperature should not be brought too low (not below 60°), as it would retard the development of the lactic acid ferment so much that the acid will not be forthcoming when needed.

It is probable that the fermentation-producing germs enter the milk in the state of spores, which require time to grow into the active bacteria. And here we see the necessity of cleaning the pails and all other dairy utensils with boiling water, which destroys most germs. If this is not done, these utensils are laden with fully-developed bacteria, ready to go to work by the time the milk is placed in contact with them, and will have accomplished much harm before the milk is used. It is probable that the atmosphere of the barn-yard, and around a cheese factory is pregnant with mature bacteria, especially when the slops of milk are allowed to accumulate. The subject of tainted milk presents a field for scientific exploration which would, no doubt, yield very profitable results.

To recapitulaté : The cows should be kept in comfortable quarters, fed on wholesome food, given plenty of pure water, kept from drinking stagnant water, treated with gentleness, milked regularly and kept clean. All the utensils, wash-cloths included, should be thoroughly scalded every time they are used, no rusty tinware should be used at all, because milk will soak into the iron and can not be reached by washing.

The milk should be thoroughly aerated as soon as possible after taken from the cow, and cooled at the same time. The simplest, thorough way to do this is by slowly pouring through an elevated strainer and allowing the milk to fall into a cold receptacle. This is better than cooling the milk before running it through the strainer, or than pouring with a dipper. It should be stirred after it has fallen into the cooled receptacles, or it will be unevenly cooled. This should be performed in a clean, airy place, away from the cows and all contaminating influences. The milk that is to be held over night should be kept under cover, and where small cans are used the can should be full, and instead of the tin cover, a fine cloth should cover the can.

SANITARY CONDITIONS OF CHEESE AND BUTTER FACTORIES.

Our inspection of cheese factories was made between the 24th of July and the 1st of October, 1888, and comprised forty-two factories located in Montgomery, Fulton, Schoharie, Schenectady, Herkimer and Chenango counties. By far the largest number were in Montgomery county.

Especial attention was paid to their sanitary condition and as a rule, to which there were very few exceptions (though these were striking) these conditions were of a uniform nature, so that the prevailing sanitary condition of cheese and butter factories throughout the State may be fairly estimated from these forty-two.

The most of them are situated upon high ground and running streams, which latter have their source in a spring.

The regions around them are, as a general thing, thinly populated and the factories isolated from other dwellings though the family of the cheese-maker usually dwells in them.

The necessary openings, doors, and windows, and the fact that most of the buildings are wooden structures, unplastered, insure good natural ventilation.

As stated above, most of these factories are supplied with spring-water, some few have shallow wells, and one had a driven well.

The water was conveyed in many instances from a distance through iron pipes, and nearly all collect it in a wooden tank for immediate use.

The water of the factories was not examined chemically, but it had the appearance of being pure at its source. Though there is danger of pollution from its storage in the wooden tanks or barrels.

The wood soon rots and the debris is held in suspension by the water.

In one factory the tank had become so foul as to emit a most disagreeable, sickening odor, and the cheese maker was very much troubled with tainted milk.

The four factories supplied by wells are located in small villages and consequently the water is more liable to be polluted.

When it is understood that a well will drain the surrounding surface to a distance of four times its depth or more, it will be seen that great care should be taken to guard against its collecting the surface wash.

The top should be raised above the level of the surface and stoned and cemented down for several feet, especially in loose soil.

It is in the matter of drainage that the want of sanitary knowledge is displayed; in fact, in most cases there is an utter disregard of sanitary laws.

The whey is carried out through a wooden trough, running under the factory for a distance, finally emptying into a tank placed a few rods from the building, from which the whey is taken by the patrons for feeding pigs, etc.

The most of these troughs leak more or less, allowing the whey to drop and accumulate under and near the factory.

A large number drain the waste from washing out the vats, utensils, and the whey squeezed from the cheese while in the press, directly through the floor, on to the ground underneath the factory, and nearly all that have any conductor at all have leaky wooden troughs, constructed by simply nailing the margin of one board to the edge of another. When the weather is dry and the

boards shrink, about all of the waste runs through and lodges immediately under the factories, at a point directly or nearly under the vats or press, that is, where the operations are carried on.

What waste is carried away from the factories by these troughs is emptied upon the surface of the ground or into a sluggish ditch, or a swamp hole at a distance more or less remote from the factory, oftenest not but a few rods away, sometimes into a running brook.* In a few instances tin gutters were used to carry off the waste. In a factory in Montgomery county the tin gutter had rusted through, so that the waste material dropped immediately under the factory. The rotten refuse from this factory could be smelled several rods away. Two drained through tile upon the surface, about 100 feet from the buildings.

A factory located in Schoharie county, and in the suburbs of a large village, had good tin pipes leading from a tin gutter in the floor, emptying into a large sewer just put in by the village, with no traps whatever.

To this unsanitary condition of drainage there were two striking exceptions. One of the factories was located in Montgomery county, and the other in Fulton. Both have well-trapped iron waste-pipes, which empty into a running stream. The latter was a typical factory, new and most complete in all its appointments. It had but one exception to being in a perfect sanitary condition, which was a privy or water-closet very nearly in the center of the building. Though it was of the most modern pattern, it should not be there. The owner informed me that he would close it at once.

In addition to the bad drainage, many factories throw refuse out of the windows or doors, until a large mass of decomposed matter has accumulated. One factory could be smelled several rods away.

Another factory in Chenango county had allowed a pile of such matter five feet high or more to accumulate under a window which opened directly out of the room in which the butter was made and the cream stood to ripen. Their butter and cheese were off flavor. A few had a pig-sty or privy near the building.

* One factory in Montgomery county was draining into a dried-up ditch near the building, and which ditch was usually dry in the dry season.

The danger arising from allowing material so rich in nitrogen compounds as milk to decompose in close juxtaposition to products intended for human consumption, is manifest to anyone with any knowledge of sanitation.

Caseine, owing to its complex organic nature, is especially prone to early decomposition, so that in a short time the soil under these factories which drain their waste underneath is thoroughly impregnated with nitrogenized matter, and this affords the best nidus for fermentation and development of germs or poison.

While it is true that but few cases of cheese poisoning do occur in proportion to the vast amount of cheese consumed, yet it occurs sufficiently often to establish the fact that active poisons do occasionally get into cheese, and it may well be that it sometimes has its origin in the unsanitary condition of the factory.

Professor Victor C. Vaughan* discovered about two years ago a poison in cheese which had caused violent sickness in many people, which he called tyrotoxicon, and has since determined by experiment that it was beyond doubt produced by fermentation, and is now able to produce the poison by placing some butyric acid ferment in healthy milk, and keeping it in a tightly-stoppered bottle for eight or ten days.

The following taken from the monthly Sanitary Records for June, 1888, published by the Ohio State Board of Health, shows what occasionally does follow from eating poisonous cheese :

“An extraordinary large number of cases of cheese-poisoning have occurred in our State within the last few days.”

“Dr. H. P. Havens, of Urbana, reports about sixty-five cases in that city. Dr. B. S. Leonard, of West Liberty, Logan county, reports not less than forty at that point, and Dr. H. S. Preston reports ten or twelve cases at Mutual, Champaign county.

“These cases were all traced to one brand of cheese made by Saxbee & Needham, who run a small factory near Mechanicsburg, Champaign county, Ohio. These gentlemen immediately recalled all cheese of the brand suspected of having caused the trouble.

“Within a few days from the occurrence of these cases, report was received from Dr. R. Harvey Reed, health officer, of fifty cases at Mansfield, Ohio.

* For details see Annual Report of the Michigan State Board of Health for 1885.

"A man came selling cheese at a low figure and quite a quantity was sold.

"There were two varieties sold, one made, according to the peddler's account, at Medina, Medina county, and the other at La Grange, Lorain county, Ohio.

"A day or two after the report of these cases, about fifty cases were reported at Marion, Ohio, by Drs. A. Rhu and A. W. Crane of that city.

"At the present writing we have only learned that the cheese eaten by those affected was purchased from a man coming from Mansfield, and we infer that the cheese is of the same brand that caused the trouble in that city.

"The symptoms varied somewhat in different cases. Vomiting was common to all, coming on in some cases in from one to two hours after eating the cheese, in others, in from four to six hours. The vomiting was generally attended with much pain in the stomach, the matter vomited being greenish or brownish frothy mucus, in some cases tinged with blood. In many cases violent purging was present, but in others it was absent.

"In all cases there was great prostration, attended with syncope or fainting in some instances.

"The sickness usually lasted from twelve to forty-eight hours, considerable pain and tenderness generally being left about the stomach after patients were up and about. No deaths have been reported.

"Samples of the cheese were secured from the various places, and a thorough examination will be made with the endeavor to determine the condition of the cheese which has caused the sickness.

"We naturally suspect the presence of tyrotoxicon or 'cheese poison,' but if this is found, the important question will be to determine the conditions which have caused its formation. A full report will be published at the conclusion of our work."

In addition to the above, Dr. B. B. Longhead, reports the cases of four adults and six children, occurring in Ravenna, Ohio, all displaying about the same class of symptoms, two were seriously and one was alarmingly sick, all finally recovered. In these latter cases the poisonous cheese was supposed to have come from a factory in this State.

In writing to the manager of this factory he replied to us that the factory was situated upon a high hill, that the milk was first-class, that the process was the ordinary stirred curd process, that he used Carter's rennet extract and no color, and that he could not account for anything wrong in the cheese. We have since been informed that the chemist of the Ohio board of health has been unable to find tyrotoxicon in the cheese causing the above sickness, which tends to demonstrate that cheese may become infected from more than one cause.

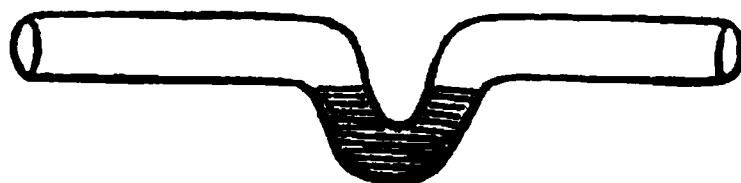
THE REMEDY.

In the first place, the water should be collected in cemented reservoirs, or, if wooden tanks are used, they should be renewed as soon as they become the least decayed, and occasionally emptied and steamed or scalded.

The floor should have a good pitch, so it would quickly drain itself; its exact conformation, of course, would be governed by the circumstances surrounding each factory, however, it would be best to have a double pitch with the gutter in the center whenever it can be so arranged.

The wash should be carried off through galvanized iron pipes. Tin will answer just as well if it is not allowed to rust, and each outlet should be trapped.

A common S trap, as it is called, is sufficient if it is properly managed. An S trap is simply a piece of the same pipe as the conductor, bent into a loop, which, when the pipe runs perpendicular, takes the shape of a letter S. When nearly horizontal this is about the form it takes:



The bend remains filled with water to the lower level of the pipe and prevents any return of gas. The only imperfection of this trap is that the water is liable to syphon out of the bend when a large volume has been made to pass through, so, to insure safety, enough water to fill the bend should always be allowed to run in after the escape of the large volume. Or the trap should be vented by a small tube tapping the building end of the trap and leading

to the outer air at some point near the upper part of the building.

These pipes should conduct the waste to a considerable distance from the factory and should be well flushed every day.

The whey should be conducted to the vat through the same kind of trapped pipes and the vat placed at considerable distance from the building on the opposite side to the making room and kept clean by steaming or frequent scalding.

The disposal of the organic matter: This can be done in various ways, viz.: By the more elaborate methods of sedimentation or by purification and precipitation through chemical agents or by what seems to us to be the most practicable and simple method, as follows: Collect it into a tight receiver from which it can be conveniently conveyed and placed upon the land, where it would form a rich fertilizer.

The solids of this waste contains the principal elements of plant-food, viz.: Phosphorus, nitrogen and carbohydrates in large proportions.

The receiver should be emptied frequently.

This waste should never be allowed to flow into a swamp-hole nor to accumulate in one mass upon the surface of the ground, neither should it be allowed to pollute the streams from which cattle or human beings get their supply.

In towns or villages which have a system of underground sewerage it should be carried into these sewers through well-trapped pipes.

The importance of carefully attending to the sanitary conditions of these establishments and maintaining the utmost cleanliness in everything pertaining to the industry, from the cattle to the finished product can not be too strongly urged upon the attention of those engaged in manufacturing cheese and butter, always keeping in mind the fact that they are handling materials peculiarly susceptible to outside influences and prone to absorb the contents of the surrounding atmosphere.

Indeed, those who do not give heed to this matter are standing in their own light; for, if very many instances of poisoning, like that in Ohio occur, the consumption of cheese especially, will be much lessened, and it is now away below what it should be.

Then again, the best-flavored article, and consequently the best selling, can not be made under the unfavorable conditions alluded to.

Poisoning from cheese has occurred at intervals in the past and does so still, and no doubt its infrequency is due to the free exposure of everything about these factories to the pure air which permeates them from off the surrounding hills.

The following is a synopsis of the work done by me :

STABLE INSPECTIONS.

On December 22, 1887, J. E. Ryan and myself visited the dairy of Wells Conklin, located on Delaware avenue, Albany, N. Y. We found his stable cold, unclean and in every way uncomfortable. There were several barrels, more or less filled with swill, and but little of any other kind of cow food in the stable. The stable contained twenty-nine cows all looking very poor and rough. He had lost seven cows from alleged anthrax during the year, and one was sick at this time, though she was recovering. Mr. Conklin was not at home at this visit, but called at my office the next day, and affirmed that he fed swill only to dry cows, and then not until after it had been sorted, so as to feed no decomposed matter ; and that he did not milk the sick cow, and had not since she was taken sick. He also promised to clean up his stable and cows, and to immediately put them under more healthy conditions. The necessity for this and the manner of doing it were fully described to him.

He did not seem to realize the dangers he was subjecting his patrons to.

On March 9, 1888, we again visited the place and found that no attempt had been made to improve the condition of either cows or stable. There were now but twenty-five cows, two of which were quite sick. The others were dirty, poor and rough, with patches of hair off from various parts of the body. He claimed that he had not milked the sick cows during their sickness, and that he did not feed swill to any of the "milkers" and but little to the "dry" cows. However, we were unable to find any hay about the premises or any other fodder, except a single wagon load of "brewers' grains" and three or four barrels partly filled with swill, which was sour and looked rotten. On March 23, 1888, we

took a sample of milk from his wagon while peddling on the street and analyzed it and found it to be adulterated. We then made complaint against him before ex-Justice Clute for both keeping his cattle in an unhealthy condition and for selling adulterated milk. He was arrested on April 4, 1888, and after one or two adjournments he pleaded guilty to both charges and paid a fine of fifty dollars.

On January 6, 1888, we visited the dairy of John Clapp, on Whitehall road, and found his stable and cows in a healthy and comfortable condition. The food was also healthy and good. These inspections of stables were made because of complaints made by citizens; those in reference to Wells Conklin came through the city board of health, and the other directly to me. In addition to the above we visited, on January 20, 1888, the cow-stables of Philip Miller, at Normanskill, Albany county, N. Y. He kept eleven cows, six of which were "milkers." The cows were poor but otherwise in fair condition. The stables were not in first-class shape, though not deplorable. Other stable inspections were made and they were found in good condition.

FACTORY INSPECTIONS.

Upon complaint made to this department, G. L. Flanders, Assistant Dairy Commissioner, and myself inspected a creamery located at Cobleskill, N. Y., for the purpose of investigating the process of clarifying milk. The process consists of simply running the milk through a Danish separator, with only one of the outlet pipes open. This forces all the milk out after the cream of the first twenty quarts required to fill the cylinder is separated, and consequently enriches the milk by just so much cream and causes the loss of the cream of the last twenty quarts which remain in the machine. The dirt and slime collect on the *side* of the cylinder, as is usual when milk is run through a centrifugal machine, and constitutes the clarification. Nothing is added and nothing is taken away, except the collections on the side of the cylinder. The composition of this latter has not been fully determined that I am aware of. It contains, beside the dirt which gets in milk from careless and unclean management, a large percentage of nitrogenous matter, probably abnormal caseine, and, according to S. M. Babcock, of the Wisconsin Agricultural Experi-

ment Station, it is rich in fibrine. (The latter has been but recently discovered in milk by Professor Babcock.) It was complained of that the milk was being deprived of its nourishing elements, which is true to a certain extent, but the clarification is a benefit. This was a new factory and in a good sanitary condition, except there were no traps in the waste-pipes which emptied into a large village sewer, as was reported in the inspection report at the time. The manager informed me that he would trap them at once. We inspected a number of the dairies in the vicinity and found them to be in good condition. The cows were natives, though largely intermixed with Holsteins.

October fifth, James E. Ryan and myself, by an urgent request of the manager, visited a creamery in the town of Guilford, Chenango county, N. Y., and found the following condition of things, in addition to the "inspector's report" transmitted at the time:

About the 20th of August, 1887, they first noticed that their cheese was off flavor. It was what is known as "sweet cheese," and on the fifteenth of September of the same year the butter became off flavor, described by the buyer in New York as a "wild, disagreeable flavor," by the maker as a "sweet, sickish taste," and by the manager as a "privy smell."

For two weeks in October the butter was good, then it became "off" again. The cheese remained all right.

The milk, feed and water, so far as they could determine, was the same as usual. The butter-maker laid it to apples which the cattle had eaten.

In the spring, and all through till the middle of September, 1888, the butter was good, when it became slightly tainted, and in the last week of September it became bad, and had remained so. The cheese was also slightly tainted part of the time, but nothing like the butter.

The butter-making is carried on in the following manner:

The milk is brought to the factory night and morning. It is poured into large shallow pans, stirred with a dipper, and cooled to from 70° to 65° Fahr. The night's milk is allowed to stand in the open pans till the next morning, when it is skimmed.

The morning's milk is allowed to set in the pans till the following morning, when it is skimmed, and the cream is mixed with

that of the previous night's milk and placed into a vat or pan.

About four quarts of sour cream is stirred through the sweet cream, and the whole is left eight or ten hours at a temperature ranging from 55° to 60° Fahr., when the temperature is raised to 65° to 70°, and kept there for a few hours, or till night, when it is cooled again to about 60°, and left till morning, when it is stirred and put into the churn without heating. It is churned to granules of about the size of peas. A little salt is added to the butter in the churn, and the larger part after it is taken out. They work their butter considerably and pack in tubs. The cream is put to churn in the morning, to make room for the next batch, and no regard paid to its condition of ripeness. The butter had a peculiar sour taste to me, not at all pleasant.

We made a careful examination of all the milk delivered to the factory, and could find nothing in it to account for the bad-flavored butter, and, indeed, it was milk of exceptionally good physical quality. Neither could we discover anything wrong in the food of the cattle. The maker was instructed in the method of butter-making pursued by the instructors of this department. We have heard nothing further from this factory.

Between July 23 and August 13, 1888, in company with F. D. Curtis part of the time, and the remainder of the time alone, I inspected thirty-five cheese and butter factories in Montgomery county, and three in Fulton county. During the same period I inspected 297 dairies, amounting to about 1,086 forty-quart cans. September 5, 1888, J. E. Ryan and myself inspected the Columbia county creamery, located at Chatham, N. Y. September 27, 1888, owing to a complaint having been made to the Dairy Commissioner, we inspected the Princetown cheese factory, the reports of which were transmitted to you at the time.

MILK INSPECTIONS.

March 19, 1888, J. E. Ryan and myself inspected the milk of four peddlers on the streets of Albany, N. Y.; also eight peddlers in the same city on March twentieth, and one March twenty-third; in all thirteen, comprising about sixty-five forty-quart cans. On May tenth we inspected the milk of one peddler on the streets of Troy, N. Y.; on May fourteenth we inspected five peddlers in the

same city; in all six, comprising about thirty forty-quart cans. On May fifteenth we inspected the milk of seven peddlers on the streets of Saratoga Springs, comprising thirty-four forty-quart cans.

On July 26, 1888, F. D. Curtis and myself inspected the milk of six peddlers on the streets of Johnstown, N. Y.; on July 27, 1888, two peddlers on the streets of Fonda, N. Y.; on July 28, 1888, seven peddlers on the streets of Canajoharie, N. Y.; on August 3, 1888, I inspected four peddlers on the streets of Fort Plain, N. Y.; on August 11, 1888, I inspected nineteen peddlers on the streets of Amsterdam, N. Y.; on August 13, 1888, I inspected fourteen peddlers on the streets of Schenectady, N. Y., amounting altogether to about 225 forty-quart cans. On September 5, 1888, J. E. Ryan and myself inspected the milk of three peddlers on the streets of Chatham, N. Y., making twelve forty-quart cans. On September 20, 1888, in connection with Dr. Stover, health officer, and an inspector of the board of health of Amsterdam, N. Y., we inspected the milk of twelve peddlers on the streets of said city. On September 22, 1888, we inspected the milk of thirteen peddlers on the streets of Schenectady, N. Y. In all the milk inspections of peddlers a certificate was given to each peddler stating the quality of his milk in reference to the legislative standard.

PROSECUTIONS.

The following is a list of the prosecutions brought in the first division of the Dairy Department:

1. In the city of Albany, against Wells Conklin, the details of whose case has already been given.

2. In the city of Cohoes, against Thomas Swartland and Lansing Fonda. These gentlemen were summoned to appear before Recorder Stevens for trial May 21, 1888. The trials were adjourned till May twenty-eighth, and from then till June eleventh, when they both pleaded guilty and were fined twenty-five dollars each.

3. In Ballston, Saratoga county, N. Y., against Albert DuBois and Patrick H. Burns. They were indicted by the grand jury May 23, 1888. They came up for trial July 9, 1888, and the indictments were quashed upon technical grounds by Judge

Lamereaux. The district attorney informs me that he has appealed the case, and that the decision is now pending.

4. In the city of Troy, against W. J. Loyd, Peter White and C. Patrie. Complaint was made before Justice Donohoe, June 1, 1888, against the aforementioned parties, all of whom pleaded guilty June 6, 1888, and were fined twenty-five dollars each ; total, seventy-five dollars.

5. September thirteenth I went before the grand jury of Chenango county, at Norwich, N. Y., and gave testimony in the case of H. M. Sherwood for violating the milk law. He was indicted.

6. In the city of Amsterdam, against Richard McMourn. This case was brought conjointly by the board of health of Amsterdam and our department. Complaint was made September twenty-sixth, and after some delay, on account of counsel, he was tried October twentieth before Recorder Putnam, convicted and fined twenty-five dollars.

7. In the city of Schenectady, against C. F. Hardin, C. P. Saunders, E. Hutchenson. In these cases the complaints were made, September twenty-seventh, against Abram Hardin, L. W. Tenbrook and Wm. Relyea, who were agents of the first three men named, who answered for them.

On October eleventh Mr. Saunders was tried by jury, but before the case went to the jury he was discharged by the judge on technical grounds. The other cases were adjourned till October seventeenth, when Mr. Hutchenson and Mr. Hardin were tried by jury. The former was convicted and fined twenty-five dollars, the latter acquitted.

BUTTER INSPECTIONS.

Owing to complaint having been made to this department, James E. Ryan and myself, on July 13, 1888, and Simon Nussbaum and myself, on July fourteenth, inspected the butter served to the guests of the passenger boats running between New York and Albany. On September 7, 1888, we also inspected the butter served on the tables in some restaurants and hotels. In each case samples were taken and analyzed by myself and found to be genuine butter.

October first James E. Ryan and myself inspected the butter in five retail stores in the village of Canajoharie, because of alleged suspicious butter in that vicinity.

Put in tabular form, it is as follows :

Total number of inspections of peddlers.....	106
Total number of dairy inspections	297
Total number of factory inspections.....	42
Total number of stable inspections.....	5
Total number of butter inspections	11
Total.....	<u>461</u>

Total number of forty-quart cans, of peddlers	466
Total number of forty-quart cans, of dairies.....	1,086
Total.....	<u>1,552</u>

Total number of prosecutions, twelve; total amount of fines, \$225.

CHEMICAL WORK.

During the month of July, 1888, I tested forty lactometers and thirty thermometers, for use by experts employed by this department.

Number of preliminary examinations of milk made for citizens, and instructions to the same in the use of the lactometer, etc.....	10
Number of samples of milk analyzed.....	39
Number of samples of butter analyzed.....	10
Number of samples of cheese analyzed	46
Number of samples of whey analyzed.....	<u>10</u>

TYPHOID FEVER IN FORT PLAIN, ALLEGED TO BE DUE TO THE MILK SUPPLY.

September twentieth J. E. Ryan and myself went to Fort Plain, Montgomery county, N. Y., to investigate an endemic of typhoid fever prevailing there at that time, alleged to be due to the milk supply.

Through the courtesy of Dr. Douglas Ayres, health officer of the village, I visited the bedside of some of the sufferers and examined the surroundings, and was thus enabled to verify the findings of the health officer, viz., that the disease did not have its origin in the milk supply. The following is the history of the matter, kindly furnished me by Dr. Ayres: The doctor was first called to the family of Peter Keesler, living two miles from the village, the first week in August last. They were farmers, and keep from seven to ten cows, and were engaged in the daily sale of milk in the village. The family has four members at home, father, mother and two sons. He found the youngest son suffering from typhoid fever, and the oldest evidently in the prodromic stage of the disease. He examined the premises very closely, and found the house (cellar especially) and immediate surroundings scrupulously neat. He also found a partially open privy vault, about five rods from the house, which had not been cleaned for a number of months, still it was not in a very offensive condition. After the daily sale of milk the cans were washed and the contents poured upon the ground near the barn, about four rods from the house.

The spot was examined at the time, but nothing could be seen nor could any smell be detected; still he considered this the most probable source of the trouble. The oldest son continued the carrying and sale of the milk for five or six days when he was compelled to take his bed by more severe symptoms as was also the father and mother. They were supplying sixty-five families with milk.

About two weeks later he called to see a family in the south part of the village, consisting of four, two of which had typhoid fever, and, within the week following, the other two came down with it. In a short time nine other families were affected with the same disease, making in all twenty cases in the same locality.

The district in which the fever occurred was in a valley about one-eighth of a mile wide, with high hills on either side, and situated to the southwest of the main part of the village. All the cases except two were in this district. These two cases occurred in a family living on the brow of the hill, above and to the south of the fever district.

The following is a list of the families affected and their relation to the suspected milk :

1. The Duffy family, consisting of four. All of which drank Keesler's milk, and three had the fever.

2. Jacob Keesler's family, consisting of five. Three of which had the fever, and all drank the milk.

3. Wm. Diefendorf and wife. Both drank the milk and both had the disease.

4. The family of Leonard Cramer, consisting of himself and wife. She had the fever, but he did not; she used only a little of the milk in her tea, but he drank the milk.

5. Edward Diefendorf and wife. She had the fever, but he did not; both drank freely of the milk.

6. Adam Miller's family, consisting of four, of which two had the disease. All drank sparingly of the milk.

7. The Guttemig family, consisting of four. One had the fever and all drank sparingly of the milk.

8. The family of Mrs. Fredenrich, consisting of four. All four had the fever, and all had drank sparingly of the milk some weeks previously to being taken sick.

9. Robert Lintner's family, consisting of five. One had the disease, and all drank sparingly of the milk.

10. Peter Kelsey's family, consisting of five. One had the fever, but did not drink the milk; the other four members of the family drank of the milk but did not have the disease.

11. The family of Mrs. Chauncey Ehle, consisting of five. Two had the fever and all drank of the milk sparingly. This was the only family affected that lived outside of the fever district, and they lived, as before stated, on the brow of the hill, a little to the south of, and above it.

Thus it is seen that there were eleven families invaded by the fever, having a total membership of forty-two persons, forty of which used the milk to a greater or lesser extent, and twenty had the disease. In one family of two members, one had fever but used the milk in her tea only, the other members drank it but did not have the fever. In another family of five members, the only one which had the disease did not use the milk at all, while the other four drank the milk but did not have the disease.

From the fact that the Keesler's furnished sixty-five families with milk, and these families were scattered over a greater portion of the village, and that the fever was limited to a comparatively small district, not following his milk route, except in the one instance, and that was so situated as to derive the poison from the fever district, and so few families out of the whole number were affected, and that the sanitary conditions of the locality were such as to readily account for the infection, we were convinced that the milk was not the source of the disease.

The sale of milk by the Keesler's was stopped by the local board of health, as soon as the second son was taken down by the fever, and it remained so until all danger of propagating the sickness had passed.

Yours respectfully.

R. D. CLARK, M. D.,

Department Chemist.

REPORT OF B. F. VAN VALKENBURGH.

NEW YORK, *September 30, 1888.*

HON. JOSIAH K. BROWN,

New York State Dairy Commissioner, Capitol, Albany, N. Y.:

SIR.—I have the honor of submitting the following report for the year ending September 30, 1888 :

During the fall and winter following the period covered by my last report, the vigorous prosecution of milk dealers, who were adulterating their milk, was continued with the gratifying result of a further decrease in the quantity of adulterated milk sold in the market. While the experts were inspecting the different stores to ascertain whether or not adulterated milk was being sold, they also inspected them for the purpose of detecting any violations of the law governing the sale of oleomargarine. In addition to these examinations, the experts were engaged in the evenings during the fall and winter in investigating restaurants, hotels and boarding-houses for the purpose of ascertaining whether or not oleomargarine was being surreptitiously served to their unsuspecting customers. These investigations showed that a large percentage of the keepers of restaurants, hotels and boarding-houses were serving these spurious goods for butter, and a large number of them were prosecuted, convicted and fined.

As we progressed with our work we found, during the months of November, December and January, a large number of these violators of the law, but after February first there was a decided decrease in the number of violations, they having taken warning and given up, to a great extent, the pernicious practice of deceiving and cheating their customers by serving them with a compound of vegetable, animal and other fats, made to resemble butter, instead of the dairy butter which their customers expected to, and supposed they were getting. The effect of the prosecu-

tions was such that in the early spring, and indeed during the entire spring months, it was a rare thing to find a restaurant, hotel or boarding-house where oleomargarine was being served.

The inspections of stores during the fall of 1887, and the winter following, did not disclose a single one with oleomargarine in stock, thus showing that the prosecutions enumerated in my last annual report had had the desired effect of convincing the former dealers in these spurious goods, as well as others who might have been willing to handle them, that they could not violate the law with impunity, and I am convinced that at this time nearly, if not quite, every one of the former dealers in oleomargarine in New York, Brooklyn and other nearby cities in this division had abandoned the business.

The cessation of the prosecutions of storekeepers, which naturally followed this nearly general abandonment of the sale of oleomargarine, led two grocers in Brooklyn, apparently, to think that we were not on the alert to detect violations of the law; consequently, they commenced handling these butter imitations. They were, however, immediately detected, with the goods in stock, prosecuted, convicted, and fined. Since that time, dealers have not been discovered handling these imitations of butter, in either New York or Brooklyn; notwithstanding a continuous and vigilant watch has been kept for such cases.

We have encountered great difficulty in convicting transgressors in some towns, notably at Port Richmond, Staten Island. In 1884-5 several prosecutions were commenced in that town, and in each and every case we failed to obtain a conviction. Nevertheless, the prosecutions had the desired effect of causing, for a time, the discontinuance there of the sale of butter imitations. During the winter of 1887-8 we discovered, however, that several parties doing business in that town, were receiving such goods direct from the oleomargarine factories in Rhode Island, the goods being delivered in various kinds of packages, intended to deceive the dairy experts and avert their suspicions, such as tubs and barrels covered with sacking, boxes, crates, and, in fact, in every description of package that could be conceived for the especial purpose of creating the belief that they contained other merchandise than oleomargarine. This state of affairs having come to my knowl-

edge, I at once decided, notwithstanding our failures to convict on Staten Island during 1884-5, to make another effort to enforce the law, I therefore detailed two State experts to make investigations in Port Richmond and other towns on that island. This they did in a very thorough manner, and found no less than eight retail grocers handling the goods. I at once caused the arrest of all the parties and after several adjournments we succeeded in having two cases tried. In each of these cases the juries acquitted, although the evidence showed clearly and conclusively the guilt of the parties; we were accorded fair and impartial trials by the justice so far as was within his power. After consulting with the attorney for the Dairy Commission who conducted these two prosecutions, we came to the conclusion that it would be impossible to get justice in Port Richmond or adjacent villages, from any jury such as was likely to be summoned by the officer who had that duty to perform. It appeared to us that the jurors summoned were such as to render a conviction most improbable, without regard to the evidence offered by the prosecution. In consequence of the apparent futility of prosecuting the remaining cases, I conferred, through our attorney, with the district attorney of Richmond county, and an arrangement was made whereby we withdrew the complaints in these cases, and asked the County Court to grant us the privilege of presenting them to the grand jury, the district attorney having previously agreed to submit the matter to the county judge.

When we appeared there, however, the district attorney declined to submit the matter to the judge, but allowed our attorney to do so. It was thereupon submitted to the court by the attorney of the Dairy Commission. The judge expressed doubts as to the advisability of that course, because (as he stated) it would put the county of Richmond to an extra expense of about \$150. He, at the same time, asked the district attorney's opinion on the subject and the district attorney agreed with him. Finding it apparently impossible to get the cases properly before the grand jury and knowing, from past experience, that it would be useless to go before the Court of Special Sessions, for the reason that the defendants would undoubtedly in every instance demand a trial by jury, and believing that such course would simply result in

acquittals, all further action in the remaining six cases was abandoned, but civil actions have been commenced against two persons, who were, apparently, the leaders in the sale of the goods and in procuring the failure of the prosecutions on Staten Island, for the recovery of penalties aggregating \$1,000 in each case, which actions are now pending. Since that time we have found no further violations of the law in Richmond county. As you are aware, the decrease in the sale of oleomargarine previous to November 1, 1887, warranted a reduction of the force of this division, and, in accordance with your direction, three of the experts employed in this division were detailed for duty in the third division of the dairy department, and have been in that division most of the time since. Notwithstanding this reduction of the force in the second division, I have been able not only to keep the sale of oleomargarine well under control, but also to give a great deal more attention to violators of the milk law, than it had been possible for me to do theretofore.

During the month of October, a large number of stores where milk was retailed were inspected by the State experts and evidence of violations of law in a number of cases was obtained. These inspections were continued during November and December and a large number of arrests were made, which had the effect of greatly reducing the sale of adulterated milk. During January and February we found but few violations of the law by this class of offenders, but the fact that very few prosecutions were made in January and February seemed to have led these dealers to believe that we were not looking after them. Therefore, in March and April we found quite a percentage of grocers were adulterating their milk with water, which was immediately followed by a large number of arrests, with the beneficial effect of showing a great decrease in the adulterations of milk during the month of May; in the month of June but few grocers were found adulterating their milk. A portion of the milk dealers will adulterate their milk with water or by skimming unless carefully watched at all times.

During the fall of 1887 we commenced active operations against restaurant keepers who were using oleomargarine on their tables. We found quite a percentage serving these goods, and during the months of November and December, 1887, and January, 1888, we made nearly 100 arrests, which had the desired effect of nearly

stopping the use of these goods by the restaurants, so much so that during the following six months we found only about twenty violations of the law.

Early in July, after several conferences with you on the subject, it was decided that inasmuch as the adulteration of milk and the use of oleomargarine by the restaurants was well under control, that a large share of the force employed in this division could be spared for work in the country districts; therefore, all the experts in this division who could be spared were detailed to country districts to assist in the general inspection of milk delivered at the different butter and cheese factories in the interior of the State, a detailed report of which hereinafter appears. The experts remaining in this division were kept during the summer continually on the watch for the adulteration of milk and the sale of oleomargarine by grocery and butter stores, and inspecting milk at the different railroad depots. Very few violations in either case were discovered during the remainder of the summer.

I have found the national law of great assistance in this division of the dairy department, in locating the dealers in oleomargarine, as all dealers in these goods are required by this law to obtain a license. It therefore becomes an easy matter, through the records of such license, to locate such persons. This law has also had a tendency to directly reduce the quantity of oleomargarine sold in all parts of the United States, for the reason that a very large share of the dealers in these goods well knew that should their customers discover that they were dealing in oleomargarine, they would lose a great share of their trade. The reduction in the sale of these goods in the United States has been very large. Six of the largest manufacturers of oleomargarine in the United States published a statement signed by each of them, in which they admit that there was manufactured in the United States during the year ending October 31, 1886, over 100,000,000 pounds. On November 1, 1886, the national law went into effect, by which all manufacturers and wholesale and retail dealers in oleomargarine were required to take out a license. All packages of goods had to be stamped with the government stamp. This prevented surreptitious sales of the goods, and reduced the sales to such an extent that during the first eight months under the law, as thus reported by Hon. Joseph S. Miller, in his annual report for the

year ending June 30, 1887, there had been only 21,513,537 pounds of oleomargarine manufactured, and that there was on hand November 1, 1886, 181,090 pounds, making a total of 21,694,627 pounds handled during the period reported.

The reduction of seventy-five per cent in the sale of oleomargarine during the first eight months under the national law seemed to have alarmed the manufacturers of these spurious goods, and caused them to renew their efforts to induce the grocers in the cities of New York and Brooklyn to handle them again. Failing in this they employed agents who canvassed among the restaurants and boarding-houses in the above-named cities, using every argument possible to convince the proprietors that they could safely handle the goods. The quantity that could thus be disposed of was small, but from the best information I have been able to obtain it appears that they have met with better success in other States where there were no State laws, or where the State laws were ineffective from want of sufficient appropriations or other causes. Therefore, I am led to believe that the sale of oleomargarine outside of New York State has increased to some extent during the past year.

An extreme effort was made by the manufacturers and dealers in oleomargarine, early in the winter of 1887-88, in Congress, to procure the repeal of the national oleomargarine law. Their plan as shown was to claim that if the present law was repealed, they would favor a law covering the adulteration of lard and other food products. There was every reason to believe that it was their intention, first, to get the law repealed, and then to present to Congress a bill not likely to be enacted, or if enacted, that would be so lumbered up with provisions to control the sale of so many different articles of adulterated food that it would not be effective. This effort on their part was met by the wholesale butter trade of New York in such an effective manner that their evident intention was so fully exposed as to prevent any action in the matter being taken by Congress.

The preceding statement showing the reduction in the sale of oleomargarine furnishes a fair basis on which to estimate the benefits of the State and national law to the dairymen of this State and of the United States, for the reason that every pound of the spurious goods prevented from going into consumption as

butter has made a market for a pound of pure dairy or creamery butter, as the dealers who handled oleomargarine and supplied their trade with it when compelled to stop dealing in these goods, were obliged either to supply their customers with butter or to go out of the business; therefore, nearly the entire trade that was formerly supplied with oleomargarine was compelled to use butter. This made a market for dairy butter which has increased from year to year as the use of oleomargarine has decreased. It also caused an increase from year to year in the price of State dairy butter, so that the prices obtained for the past two years have been fairly remunerative to the farmer, notwithstanding that the quantity produced has increased yearly in about the same ratio as the sale of oleomargarine has decreased. The following statistics showing the amount of butter handled in New York do not show any increase during the years ending November 1, 1885-86-87, but show that just about the same amount was received each year which is accounted for by the fact that oleomargarine was formerly shipped by the manufacturers and dealers as butter, and entered into the statistics as such, there being no way to separate the two. In addition to the oleomargarine received from other States, and included in the figures hereinafter given, there was a large quantity made in the city and State of New York not included in these figures, therefore, the increased production of butter for the New York market within the past four years has equaled the amount of oleomargarine formerly consumed, and supplied the increase of population with butter.

The amount of exports of butter from the United States has been decreasing yearly from 1884, when there was 21,391,196 pounds exported, until in 1887 there was only 12,531,171 pounds exported, and during the first ten months of 1888 only 8,483,685 pound exported. Oleomargarine, previous to the national law going into effect, was exported as butter, therefore the same difficulty as in the *receipt* of butter arises, but after making due allowance for the shortage in export it is plain to be seen that the make has been increased yearly and that prices have advanced over two and one-half cents per pound during the past four years. This is only a part of the benefit derived from the laws enacted to protect the dairymen against fraud, for I am fully convinced that if no laws had been passed the price of butter

would have declined, instead of advancing from an average price of twenty-one cents per pound in 1885, and would have declined during the past three years to such an extent that by this time the average price of butter for the year ending November 1, 1888, would not have been over fifteen cents per pound. It is this saving of a further decline in butter that should be considered to be, as it has been, of greater benefit to the dairy interest than the increase in price.

The following statistics show the depreciation in the value of the dairy product handled in New York city during the years ending November 1, 1882, 1883, 1884 and 1885, and the advance in value during the years ending November 1, 1886, 1887 and 1888:

The receipts and value of butter handled in New York city for seven years ending November 30, 1882-1888, were as follows:

FOR THE YEAR ENDING NOVEMBER 30, 1882.

Eastern, 44,215,990 pounds, valued at 29½ cents	
per pound.....	\$13,043,617 05
Western, 35,648,850 pounds, valued at 28 cents	
per pound.....	9,981,678 00
Total, 79,864,840 pounds.....	<u>\$23,025,295 05</u>

FOR THE YEAR ENDING NOVEMBER 30, 1883.

Eastern, 44,804,060 pounds, valued at 26 cents	
per pound.....	\$11,649,055 60
Western, 45,743,850 pounds, valued at 24 cents	
per pound.....	10,978,524 00
Total, 90,547,910 pounds.....	<u>\$22,627,579 60</u>

FOR THE YEAR ENDING NOVEMBER 30, 1884.

Eastern, 38,263,820 pounds, valued at 24½ cents	
per pound.....	\$9,374,635 90
Western, 49,853,350 pounds, valued at 22 cents	
per pound.....	10,967,737 00
Total, 88,117,170 pounds.....	<u>\$20,342,372 90</u>

FOR THE YEAR ENDING OCTOBER 31, 1885.

Eastern, 39,480,350 pounds, valued at 22 cents per pound.....	\$8,685,677 00
Western, 54,086,500 pounds, valued at 20 cents per pound	10,817,300 00
	<hr/>
Total, 93,566,850 pounds.....	\$19,502,977 00
	<hr/> <hr/>

These figures show, by comparing 1885 with 1882, that the receipts for 1885 were 13,702,010 pounds in excess of 1882, but the marketable value was \$3,522,318.05 less. In order to show the real difference take the receipts of 1885, 93,566,850 pounds, and value eastern at twenty-nine and one-half cents, and western at twenty-eight cents, the same as the receipts of 1882, we have a total of \$26,790,923.25. Deduct the actual value of 1885, \$19,502,977, showing a loss on amount handled, thus compared, of \$7,287,946.25.

The receipts and value of butter handled in New York city, for the year ending October 31, 1886, were as follows :

Eastern, 38,985,520 pounds, valued at 23½ cents per pound	\$9,161,597 20
Western, 54,716,000 pounds, valued at 21½ cents per pound.....	11,763,940 00
	<hr/>
Total, 93,701,520 pounds, valued at.....	\$20,925,537 20
Deduct value of product handled in 1885.....	19,502,977 00
	<hr/>
	\$1,422,560 20
Deduct value of increased receipts over 1885...	28,954 05
	<hr/>
Net gain on same amount of receipts of butter over 1885.....	\$1,393,606 15
	<hr/>
The total value of milk and cream handled in New York for the year ending October 31, 1886, was	\$8,160,750 00
	<hr/> <hr/>

The receipts and value of butter, milk and cream for the year ending October 31, 1887, were as follows :

BUTTER.

Eastern, 37,062,130 pounds, valued at 24 cents per pound.....	\$8,894,911 20
Western, 56,650,350 pounds, valued at 22 cents per pound.....	12,463,077 00
Total, 93,712,480 pounds, valued at.....	\$21,357,988 20
Value of milk and cream.....	9,499,900 00
	<hr/>
	\$30,857,888 20
Deduct value of butter, milk and cream handled in 1886.....	29,086,287 20
	<hr/>
Net gain in 1887 over 1886.....	\$1,771,601 00
Add net gain in cheese of 1887 over 1886.....	687,843 00
	<hr/>
Total net gain on butter, cheese, milk and cream handled in New York in 1887 over 1886.....	\$2,459,444 00
	<hr/> <hr/>

The receipts and value of dairy product handled in New York city during the year ending October 31, 1888, were as follows :

BUTTER.

Eastern, 31,784,410 pounds, valued at 24½ cents per pound.....	\$7,787,180 45
Western, 63,457,950 pounds, valued at 22½ cents per pound.....	14,278,038 75
	<hr/>
Total value of butter handled.....	\$22,065,219 20
	<hr/> <hr/>

CHEESE.

Eastern, 98,877,955 pounds, valued at 10½ cents per pound.....	\$10,382,185 27
Western, 3,637,260 pounds, valued at 8½ cents per pound.....	309,167 10
In transit for export, 7,636,850 pounds, valued at 10 cents per pound.....	763,685 00
	<hr/>
Total, 110,152,065 pounds, valued at.....	\$11,455,037 37
	<hr/> <hr/>

MILK.

	Gallons.
Crude milk	58,678,390
Cream	1,191,940
Condensed milk	751,830
Total, 60,622,160 gallons, valued at	\$9,652,500 00
<hr/>	
Total value of butter handled	\$22,065,219 20
Total value of cheese handled	11,455,037 37
Total value of milk and cream handled	9,652,500 00
<hr/>	
	\$43,172,756 57
Deduct total value of dairy product handled in 1887	43,047,771 02
<hr/>	
Net gain in 1888 over 1887	\$124,985 55
<hr/>	

The gain in value over 1887 is light, for the reason that the average price of cheese has been one cent per pound lower than in 1887, although butter averaged one-half cent higher.

Oleomargarine made its first appearance in the New York market in noticeable quantities in the winter of 1879 and 1880, and from that time until 1884 the amount handled increased yearly to such an extent that according to the best data obtainable it was estimated that during the year ending November 1, 1884, there was not less than 10,000,000 pounds sold in the city of New York, and at least 5,000,000 pounds were handled in other cities and villages within the State, making a total of not less than 15,000,000 pounds consumed as and for butter by the citizens of this State during the above-named year.

The first prosecutions under the dairy laws were commenced in the fall of 1884, and a great reduction in the sale of oleomargarine immediately followed. Very soon after the 1st of January, 1885, the manufacturers and the wholesale and retail dealers seemed to have pooled their interest and decided to defy the law, claiming it to be unconstitutional. For this reason the sales of oleomargarine increased largely during the months of January, February and March. A large number of prosecutions were commenced, but as

one case against a manufacturer was appealed to the court of last resort, to test the constitutionality of the law, we succeeded in obtaining but very few convictions. The friends of the law becoming satisfied that an adverse decision would be rendered, succeeded in getting a new law passed by the Legislature. As anticipated, the old law was declared unconstitutional, but immediately following this, on April 30, 1885, the new law, under which the commission is now acting, went into effect.

In the fall of 1885, active measures were taken to enforce this law, and a large number of prosecutions were brought during the winter of 1885-6. A few cases were tried, but the greater share of the parties prosecuted waived examination and went before the grand jury and were indicted. Very few of this class of cases were tried, the courts having concluded that it was best to await the decision of the court of last resort in a test case that had been appealed to that court.

In the fall of 1886, as usual, at the beginning of the cold weather, the trade in these goods sprang up again, when we commenced prosecuting all those found violating the law, and continued to do so during the winter of 1886-7. Although but few cases were tried, we succeeded in keeping the sale of these goods well under control. On March twenty-second, a decision affirming the constitutionality of the law was handed down by the court of last resort. Shortly thereafter, nearly all these cases, then awaiting a trial, were disposed of. This system of continuous prosecution had the desired effect of decreasing the amount of oleomargarine sold each year. To such an extent were these goods taken out of the market, that during the year covered by this report, there have been very few violations of the law by grocers or retail dealers. Having driven the dealers in these goods within the State almost entirely out of the business of selling oleomargarine, we turned our attention, early in the fall of 1887, to enforcing the law relating to hotels, restaurants, boarding-houses and bakeries, which went into effect June 16, 1887, the result of which is hereinafter stated.

The Legislature of this State was among the first to appreciate the danger of oleomargarine injuring the dairy interest and to pass laws in 1882 to regulate the sale of all butter imitations, but,

as no special department was created to see that the laws were enforced, they became a dead letter on the statute books; appreciating this fact it, in 1884, enacted new laws and created the Dairy Commissioner. Since that date several laws have been passed to strengthen the commission, which have been so well enforced that I think I am warranted in stating that so far as the sale of these spurious goods by dealers is concerned, it is nearly, if not quite suppressed. A small percentage of restaurant keepers are still induced by agents of the manufacturers in Connecticut and Rhode Island, to use the goods. They are shipped direct to the restaurants under cover of sacking or in boxes and barrels, so marked that no one can tell the contents of the package, great care being taken to keep the government stamp covered; but as the amount that can be thus surreptitiously disposed of is very small, it is safe to say that the competition of this fraud with butter within the State is very slight; still, as these imitations of butter supply to a certain extent the markets in other States, where we formerly found a market for more or less of our dairy butter, it has, and still does, affect the price of dairy butter.

The manufacturers of oleomargarine continue to canvass in New York and Brooklyn as well as other cities, and to use every argument in their power to induce grocers and restaurant keepers to handle their goods. Therefore it is necessary to keep a continual watch for violations, for if it should become known that they were not continually under the surveillance of the State agents, the trade in these goods would spring up again, and within sixty days would flourish as well as ever. It will be far cheaper to keep the goods out of the market than to drive them out should they get a foothold again.

The amount expended annually for the past few years to suppress the fraudulent sale of butter imitations and to prevent the adulteration of milk, may seem large when stated in round figures at fifty to seventy-five thousand dollars, but when it is considered that this large amount does not represent quite five cents for each cow in the State, or in other words, if the tax was paid by the farmers alone, it would amount to only thirty-one and one-fourth cents per farm, it seems small, while in fact three-fifths of this tax

is paid by the cities and towns, leaving not over twelve cents per farm tax on the average.

Very few persons appreciate that we have within the State of New York over ten per cent of the cows in the United States. The report of Hon. Norman J. Coleman, Commissioner of Agriculture, for the year ending January 1, 1888, shows that there were in the United States on that date 14,856,414 cows, and that on the same date there were in the State of New York 1,540,053 cows, and that the value of the cows in this State at the date above-mentioned was \$46,971,617. Add to the value of the cows as given, the value of the land necessary to keep them and the value of the implements necessary to manufacture the milk from these cows into butter and cheese, we have a sum of nearly, if not quite, four hundred million (400,000,000) dollars invested within this State in the business of dairying in all of its branches. This great interest should and must be protected against all fraudulent imitations.

The dairymen, no doubt, have already heard it intimated that the Dairy Commission has done its work and now should be abolished and its duties turned over to the State and city health boards. This argument is made to appear to come from the health boards, while in fact it does not originate with them, but does originate with and is being put forward by those interested in the manufacture and sale of oleomargarine, who are trying to accomplish their object in this underhanded manner. The day that the dairymen of this State relinquish a special department to look after their interests and allow the Dairy Commission to go out of existence, will mark the day on which that interest will begin to travel a downward road again, and should the enemy get a firm foothold it will require a longer, harder and more expensive fight to replace that interest on sound footing than the one that has been going on for the past four years. The fight is not ended yet, and in all probability never will end, as these fraudulent imitations have too large a profit in them to ever go entirely out of existence, therefore it behooves the farmer and the dairymen to be continually on their guard against this, their greatest enemy.

The following is a detailed report of the work performed by each employé of the department between September 30, 1887, and September 30, 1888, in prosecuting violators of the laws relating to the sale of oleomargarine :

William W. Meeteer, expert, employed in the above service 151 days :

Number of days in court.....	53
Number of days obtaining evidence	3
Number of days inspecting stores.....	44
Number of days visiting hotels, restaurants and boarding-houses	51

Total number of days...	151
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Number of samples purchased and taken	570
Number of samples delivered to chemists.....	23
Number of evenings obtaining samples	83
Number of appearances in cases	204
Number of complaints made.....	24
Number of hotels, restaurants and boarding-houses visited	360
Number of stores inspected	1,346
Estimated number of miles traveled	7,420

Joseph J. Sorogan, expert, employed in the above service 139 days :

Number of days in court.....	47
Number of days obtaining evidence	33
Number of days on special duty	10
Number of days inspecting stores.....	29
Number of days visiting hotels, restaurants and boarding-houses	20

Total number of days.....	139
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Number of samples purchased and taken	335
Number of samples delivered to chemist	15
Number of evenings obtaining samples	19

NEW YORK STATE DAIRY COMMISSIONER. 495

Number of appearances in cases	141
Number of complaints made	20
Number of hotels, restaurants and boarding-houses visited	180
Number of stores inspected	678
Estimated number of miles traveled	7,991

Thomas R. Gray, expert, employed in the above service 171 days :

Number of days in court	81
Number of days obtaining evidence	33
Number of days on special duty	5
Number of days inspecting stores	40
Number of days visiting hotels, restaurants and boarding- houses	12

Total number of days 171

Number of samples purchased and taken	640
Number of samples delivered to chemists	21
Number of evenings obtaining samples	5
Number of appearances in cases	213
Number of complaints made	28
Number of hotels, restaurants and boarding-houses visited	248
Number of stores inspected	736
Estimated number of miles traveled	5,750

Edmund S. Wilson, expert, employed in the above service 154 days :

Number of days in court	68
Number of days obtaining evidence	31
Number of days on special duty	8
Number of days inspecting stores	35
Number of days visiting hotels, restaurants and boarding- houses	12

Total number of days 154

Number of samples purchased and taken.....	432
Number of samples delivered to chemists	21
Number of evenings obtaining samples.....	40
Number of appearances in cases.....	122
Number of complaints made.....	10
Number of hotels, restaurants and boarding-houses visited	235
Number of stores inspected.....	836
Estimated number of miles traveled.....	7,694

Archibald D. Clark, expert, employed in the above service 149 days:

Number of days in court.....	38
Number of days obtaining evidence	27
Number of days on special duty	30
Number of days inspecting stores.....	34
Number of days visiting hotels, restaurants and boarding- houses.....	20
Total number of days.....	149

Number of samples purchased and taken	413
Number of samples delivered to chemists.....	10
Number of evenings obtaining samples	31
Number of appearances in cases	67
Number of complaints made	5
Number of hotels, restaurants and boarding-houses visited	215
Number of stores inspected	743
Estimated number of miles traveled.....	4,385

Thomas C. Du Bois, expert, employed in the above service ninety-eight days:

Number of days in court.....	50
Number of days obtaining evidence	10
Number of days on special duty	3

NEW YORK STATE DAIRY COMMISSIONER. 497

Number of days inspecting stores	20
Number of days visiting hotels, restaurants and boarding-houses	15
	<hr/>
Total number of days	98
	<hr/>
Number of samples purchased and taken	349
Number of samples delivered to chemists.....	19
Number of evenings obtaining samples	53
Number of appearances in cases	81
Number of complaints made	12
Number of hotels, restaurants and boarding-houses visited	340
Number of stores inspected	312
Estimated number of miles traveled	3,900
	<hr/>

Jedadiah R. Wheeler, expert, employed in the above service ninety-six days :

Number of days in court	44
Number of days obtaining evidence.....	18
Number of days on special duty.....	10
Number of days inspecting stores	11
Number of days visiting hotels, restaurants and boarding houses	13
	<hr/>
Total number of days.....	96
	<hr/>

Number of samples purchased and taken.....	422
Number of samples delivered to chemists	27
Number of evenings obtaining samples.....	40
Number of appearances in cases.....	87
Number of complaints made	24
Number of hotels, restaurants and boarding-houses visited	285
Number of stores inspected.....	665
Estimated number of miles traveled	5,227
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Russell W. Moore, A. M., M. Sc. :

Number of analyses of butter samples	45
Number of appearances in cases.....	71
Number of days in court.....	34

Joseph F. Geisler, Ph. C. :

Number of analyses of butter samples	50
Number of appearances in cases....	74
Number of days in court.....	36

Edward G. Love, Ph. D. :

Number of analyses of butter samples.....	28
Number of appearances in cases.....	55
Number of days in court.....	41

Charles M. Stillwell, A. M., and Thomas S. Gladding, A. M. :

Number of analyses of butter samples.....	19
Number of appearances in cases.....	29
Number of days in court	6
Number of analyses of cheese.....	1

Arthur C. Salmon, counsel :

Number of cases prosecuted.....	42
Number of cases disposed of	33
Number of convictions.....	23
Number of acquittals.....	4
Number of cases withdrawn.....	6
Number of appearances in cases	69
Number of days in court	54
Number of cases bailed to Special Sessions	2
Amount of fines imposed.....	\$1,255

Francis V. S. Oliver, counsel :

Number of cases prosecuted	28
Number of cases disposed of.....	29
Number of convictions.....	28
Number dismissed on examination	1
Number of appearances in cases	52

NEW YORK STATE DAIRY COMMISSIONER. 499

Number of days in court.....	52
Number of cases bailed to Special Sessions.....	28
Amount of fines imposed.....	<u>\$1,425</u>

Charles D. Olendorf, counsel :

Number of cases prosecuted.....	37
Number of cases disposed of	23
Number of convictions....	21
Number dismissed from calendar	2
Number of appearances in cases	84
Number of days in court	43
Number of cases bailed to Special Sessions	22
Number of cases bailed to General Sessions.....	15
Amount of fines imposed.....	<u>\$1,150</u>

La Roy S. Gove, counsel :

Number of cases prosecuted.....	18
Number of cases disposed of	15
Number of convictions.....	14
Number dismissed on examination	1
Number of appearances in cases	64
Number of days in court....	45
Number of cases bailed to Special Sessions	13
Number of cases bailed to General Sessions.....	4
Amount of fines imposed.....	<u>\$700</u>

TOTAL (*Oleo.*).

Number of days (experts)	958
Number of days in court	381
Number of days obtaining evidence	155
Number of days on special duty	66
Number of days inspecting stores.....	213
Number of days visited hotels, restaurants and boarding-houses	143
Number of samples purchased and taken	3,161
Number of samples delivered to chemists.....	136
Number of evenings obtaining samples	271
Number of appearances in cases	1,413

Number of complaints made.....	123
Number of stores visited.....	6,116
Number of stores inspected.....	5,316
Number of hotels, restaurants and boarding-houses visited.....	1,863
Estimated number of miles traveled.....	42,367
Number of analyses "butter samples".....	142
Number of cases bailed to General Sessions.....	20
Number of cases bailed to Special Sessions.....	88
Number of cases prosecuted.....	110
Number of cases disposed of.....	107
Number of cases dismissed on examination.....	2
Number of cases dismissed from calendar.....	1
Number of convictions.....	92
Number of acquittals.....	5
Forfeited bail.....	1
Number of cases not disposed of.....	15
Amount of fines imposed.....	<u>\$4,800</u>

The status of the following twelve prosecutions for violation of the oleomargarine law was fully reported in my fourth annual report to you ; the final disposition of them is given in the annexed table :

Case No.	NAMES.	Called for trial.	Court.	Result.	Fined.	Remarks.
768	The People v. Phelps.....	1888. January 30	General Sessions, New York.....	Pleaded guilty.....	\$100 00	Sentence suspended.
773	The People v. O'Connor.....	1887. November 21	General Sessions, New York.....	Pleaded guilty.....	.....
204	The People v. Rathgen.....	.....	General Sessions, New York.....	.....	.....
140	The People v. Nurse.....	November —	Special Sessions, New York. ...	Convicted	100 00	
1,315	The People v. Arensburg .....	.....	General Sessions, Brooklyn .....	.....	.....
1,506	The People v. McCann .....	.....	General Sessions, Brooklyn .....	.....	.....
1,209	The People v. Bingley.....	October 19	Special Sessions, New York.....	Convicted	100 00	
868	The People v. Hynes .....	.....	General Sessions, New York.....	.....	.....
222	The People v. Etzel.....	November 2	Special Sessions, New York.....	Pleaded guilty.....	100 00	
621	The People v. Kempster.....	.....	General Sessions, New York.....	.....	.....
106	The People v. Koehler .....	.....	General Sessions, New York.....	.....	.....
442	The People v. Dwyer	November 21	General Sessions, New York.....	Pleaded guilty.....	100 00	
					\$600 00	

The foregoing statement, representing twelve cases remaining untried as reported to you September 30, 1887, shows the following result :

Two pleaded guilty in General Sessions, fined.....	\$200
One pleaded guilty in General Sessions, sentence suspended.....	
Six are awaiting trial.....	
Two were convicted on trial at Special Sessions, fined...	200
One pleaded guilty on trial at Special Sessions, fined....	100
	<hr/>
	\$500
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The following statement represents prosecutions commenced during the year ending September 30, 1888, under chapter 183, Laws of 1885, as amended by chapter 577, Laws of 1886, and by chapter 583, Laws of 1887, relating to the sale of oleomargarine, and the present status of the cases :

CASE No. 1216 H.

THE PEOPLE *v.* EHRLEB.

Tombs Police Court, New York city.

Warrant issued November 18, 1887; answered to November sixteenth, and held for trial at Special Sessions. Case called for trial November twenty-first; adjourned to November twenty-eighth, and pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meetser, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 523 G.

THE PEOPLE *v.* BERGEN.

Essex Market Police Court, New York.

Warrant issued November 21, 1887; answered to November twenty-second, and held to bail for trial at Special Sessions. Case called November twenty-eighth, and adjourned to November thirtieth. Pled guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: Thomas R. Gray and J. F. Geisler, chemist.

CASE No. 524 G.

THE PEOPLE v. GROGEN.

Essex Market Police Court, New York.

Warrant issued November 21, 1887; answered to November twenty-second; adjourned to twenty-ninth; held to bail for trial at General Sessions before grand jury December twelfth; indicted. Case transferred to Special Sessions; called for trial May 17, 1888; adjourned to May 24, 1888, and pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: Thos R. Gray and Edward G. Love, chemist.

CASE No. 527 G.

THE PEOPLE v. SCHOLLES.

Jefferson Market Police Court, New York.

Warrant issued October 24, 1888; answered to October twenty-seventh, and held to bail for trial at General Sessions before grand jury November 23, 1887; indicted. Called for trial December twenty-second; adjourned to twenty-third; to January 3, 1888; to February twenty-fourth, and pleaded guilty. Sentence suspended. Case called on a suspended sentence of May 23, 1887, and a severe penalty was imposed.

Counsel, C. D. Olendorf.

Witnesses: T. R. Gray, J. R. Wheeler and C. M. Stillwell, chemist.

CASE No. 1417 I.

THE PEOPLE v. SCHOLLES.

Essex Market Police Court, New York.

Warrant issued November 17, 1887; answered o November nineteenth, and held to bail for trial at Special Sessions. Called for trial November twenty-third, and pleaded guilty. Fined \$100.

Counsel, Chas. D. Olendorf.

Witnesses: J. R. Wheeler, T. R. Gray and E. G. Love, chemist.

CASE No. 1211 H.

THE PEOPLE *v.* CARROLL.*Yorkville Police Court, New York.*

Warrant issued October 21, 1887; answered to October twenty-second, and held to bail for trial at Special Sessions. Called for trial October 31, 1887. Plead guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 528 G.

THE PEOPLE *v.* SCHOLES.*Jefferson Market Police Court, New York.*

Warrant issued October 24, 1887; answered to October twenty-seventh, and held to bail for trial at General Sessions; before grand jury November twenty-third; indicted. Called for trial April 9, 1888. Adjourned to April tenth; tried by jury and acquitted.

Counsel, Chas. Olendorf.

Witnesses: T. R. Gray, J. R. Wheeler and E. G. Love, chemist.

CASE No. 884 D.

THE PEOPLE *v.* JOST.*Jefferson Market Police Court, New York.*

Warrant issued November 11, 1887, and answered to November twelfth, and held to bail for trial at General Sessions; before grand jury December fifteenth; indicted. Called for trial January 22, 1888. Adjourned to February twenty-seventh; to March first, and transferred to Special Sessions. Called for trial March 7, 1888, and pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 886 D.

THE PEOPLE v. MEISNER.

Jefferson Market Police Court, New York.

Warrant issued November 11, 1887; answered to November twelfth; held to bail for trial at General Sessions; before grand jury December fifteenth, and indicted. Called for trial December twenty-second; adjourned to January 3, 1888; adjourned to January sixth, and pleaded guilty. Fined fifty dollars.

Counsel, C. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and C. M. Stillwell, chemist.

CASE No. 882 D.

THE PEOPLE v. BLOOMINGDALE.

Jefferson Market Police Court, New York.

Warrant issued November 14, 1887; answered to November sixteenth; held to bail for trial at Special Sessions. Called for trial November twenty-first; adjourned to November twenty-eighth and tried; convicted. Fined fifty dollars.

Counsel, C. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. G. Love, chemist.

CASE No. 883 D.

THE PEOPLE v. LOCKLEY.

Jefferson Market Police Court, New York.

Warrant issued November 14, 1887; answered to November sixteenth, and held to bail for trial at General Sessions before grand jury December fifteenth, and indicted. Called for trial December 22, 1887, and pleaded guilty. Fined fifty dollars.

Counsel, C. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 881 D.

THE PEOPLE *v.* PETERSON.*Jefferson Market Police Court, New York.*

Warrant issued November 14, 1887; answered to November nineteenth, and held to bail for trial at Special Sessions. Called for trial November 23, 1887, and pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. G. Love, chemist.

CASE No. 1218 H.

THE PEOPLE *v.* VON HEYN.*Tombs Police Court, New York.*

Warrant issued November 15, 1887; answered to November seventeenth, and held to bail for trial at Special Sessions. Called for trial November twenty-third, and pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 1219 H.

THE PEOPLE *v.* GILLISPIE.*Tombs Police Court, New York.*

Warrant issued November 15, 1887; answered to November sixteenth, and held to bail for trial at Special Sessions. Called for trial November twenty-first. Adjourned to November twenty-eighth, and pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 1419 I.

THE PEOPLE v. STARK, SR.

Jefferson Market Police Court, New York.

Warrant issued November 30, 1887, answered to December first. Adjourned to December fifth for examination, held to bail for trial at Special Sessions. Called for trial December twelfth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 1221 H.

THE PEOPLE v. LINSMANN.

Tombs Police Court, New York.

Warrant issued November 15, 1887 ; answered to November sixteenth ; held to bail for trial at Special Sessions. Called for trial November twenty-first. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses : W. W. Meeteer, J. J. Sorogan and E. G. Love, chemist.

CASE No. 230 F.

THE PEOPLE v. ARNOLD.

Tombs Police Court, New York.

Warrant issued November 16, 1887 ; answered to November seventeenth ; held to bail for trial at Special Sessions. Called for trial November twenty-third. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses : E. S. Wilson, W. W. Meeteer and E. G. Love, chemist.

CASE No. 529 G.

THE PEOPLE *v.* KRANSZ.*Jefferson Market Police Court, New York.*

Warrant issued November 16, 1887; answered to November nineteenth; held to bail for trial at Special Sessions. Called for trial November thirtieth. Pleaded guilty. Fined fifty dollars. Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. R. Wheeler and J. F. Geisler, chemist.

CASE No. 530 G.

THE PEOPLE *v.* COLLINS.*Jefferson Market Police Court, New York.*

Warrant issued November 16, 1887; answered to November nineteenth; held to bail for trial at Special Sessions. Called for trial November twenty-third; adjourned November twenty-eighth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 887 D.

THE PEOPLE *v.* TRACEY.*Jefferson Market Police Court, New York.*

Warrant issued November 16, 1887; answered to November seventeenth, and held to bail for trial at General Sessions. Before grand jury December fifteenth. Indicted.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and C. M. Stillwell, chemist.

CASE No. 888 D.

THE PEOPLE v. POUND.

Jefferson Market Police Court, New York.

Warrant issued November 16, 1887; answered to November seventeenth; held to bail for trial at Special Sessions. Called for trial November twenty-third. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. G. Love, chemist.

CASE No. 889 D.

THE PEOPLE v. MULLER.

Jefferson Market Police Court, New York.

Warrant issued November 16, 1887; answered to November seventeen; held to bail for trial at General Sessions; before Grand Jury December fifteenth; indicted. Called for trial December twenty-second. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 890 D.

THE PEOPLE v. STEINBERG.

Jefferson Market Police Court, New York.

Warrant issued November 16, 1887; answered to November seventeenth; held to bail for trial at General Sessions; before Grand Jury December fifteenth; indicted. Called for trial December twenty-second. Pleaded guilty. Sentence suspended.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. G. Love, chemist.

CASE No. 1418 I.

THE PEOPLE *v.* POUND.*Jefferson Market Police Court, New York.*

Warrant issued November 30, 1887; answered to December first; adjourned to December eighth; held examination and discharged.

Counsel, F. V. S. Oliver.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 885 D.

THE PEOPLE *v.* SULTE.*Harlem Police Court, New York.*

Warrant issued November 18, 1887; answered to November eighteen; held to bail for trial at Special Sessions. Called for trial November twenty-third. Pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, W. W. Meeter and C. M. Stillwell, chemist.

CASE No. 1212 H.

THE PEOPLE *v.* GARTLAND.*Harlem Police Court, New York.*

Warrant issued November 18, 1887; answered to November eighteen; held to bail for trial at General Sessions before grand jury November twenty-eighth. Indicted. Called for trial January 13, 1888. Adjourned to January sixteenth; adjourned indefinitely.

Counsel, Charles D. Olendorf.

Witnesses: W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 1215 H.

THE PEOPLE *v.* FORD.

Harlem Police Court, New York.

Warrant issued November 18, 1887; answered to November eighteenth; held to bail for trial at Special Sessions. Called for trial November twenty-third; adjourned to December fifth and pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: W. W. Meeteer, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 525 G.

THE PEOPLE *v.* POWERS.

Essex Market Police Court, New York.

Warrant issued November 21, 1887; answered to November twenty-second, and held to bail for trial at Special Sessions. Called for trial November twenty-eighth; adjourned to November thirtieth. Plead guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: T. R. Gray, J. J. Sorogan and E. G. Love, chemist.

CASE No. 1415 L.

THE PEOPLE *v.* FRANSZ.

Essex Market Police Court, New York.

Warrant issued November 19, 1887; answered to November twenty-first; held to bail for trial at Special Sessions. Called for trial November twenty-eighth; adjourned to November thirtieth, and pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 1416 L.

THE PEOPLE v. GUNTHER.

Essex Market Police Court, New York.

Warrant issued November 19, 1887; answered to November twenty-first; held to bail for trial at Special Sessions. Case called for trial November twenty-eighth. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist

CASE No. 522 G.

PEOPLE v. KENNEY.

Essex Market Police Court, New York.

Warrant issued December 7, 1887; answered to December tenth; held to bail for trial at Special Sessions. Called for trial December fifteenth. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: T. R. Gray, J. R. Wheeler and J. F. Geisler, chemist

CASE No. 532 G.

THE PEOPLE v. HOFFMAN.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-ninth. Pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray and J. F. Geisler, chemist

CASE No. 533 G.

THE PEOPLE v. EMANUEL.

Justice Massey's Court, Brooklyn, N. Y.

Warrant issued November 25, 1887; answered to November twenty-eighth; adjourned to December first; to sixth, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and J. F. Geisler, chemist

CASE No. 231 F.

THE PEOPLE *v.* MILLS.

Justice Massey's Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-fifth; held to bail for trial at Special Sessions. Called for trial December first. Pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and E. G. Love, chemist.

CASE No. 232 F.

THE PEOPLE *v.* FROELIGH.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-fifth; held to bail for trial at Special Sessions. Called for trial December sixth; adjourned to December fourteenth; to twenty-first, to January sixth, and tried by jury. Convicted. Fined seventy-five dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and E. G. Love, chemist.

CASE No. 1424 I.

THE PEOPLE *v.* NILES.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 29, 1887; answered to December first, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 1213 H.

THE PEOPLE *v.* MAHONEY.

Tombs Police Court, New York.

Warrant issued November 23, 1887; answered to November twenty-fifth; held to bail for trial at Special Sessions. Called for trial December fifth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, A. D. Clark and E. G. Love, chemist.

CASE No. 1214 H.

THE PEOPLE *v.* HOLLAND.*Tombs Police Court, New York.*

Warrant issued November 23, 1887; answered to November twenty-eighth; held to bail for trial at Special Sessions. Called for trial December fifth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, J. J. Sorogan and E. G. Love, chemist.

CASE No. 521 G.

THE PEOPLE *v.* O'CONNOR.*Tombs Police Court, New York.*

Warrant issued December 5, 1887; answered to December seventh; held to bail for trial at Special Sessions. Called for trial December twelfth; adjourned to sixteenth; to thirtieth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. R. Wheeler and J. F. Geisler, chemist.

CASE No. 526 G.

THE PEOPLE *v.* BERGEN.*Tombs Police Court, New York.*

Warrant issued December 5, 1887; answered to December sixth; held to bail for trial at Special Sessions. Called for trial December twelfth; adjourned to fifteenth. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. R. Wheeler and J. F. Geisler, chemist.

CASE No. 1217 H.

THE PEOPLE *v.* McCALL.

Tombs Police Court, New York.

Warrant issued November 30, 1887 ; answered December first ; held to bail for trial at General Sessions ; before grand jury December thirteenth. Indicted. Called for trial December twenty-second. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses : W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 1220 H.

THE PEOPLE *v.* CONNOLLY.

Justice Naeher's Police Court, Brooklyn, N. Y.

Warrant issued December 2, 1887 ; answered to December third ; held to bail for trial at Special Sessions. Called for trial December nineteenth ; adjourned to December twenty-eighth, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. O. Salmon.

Witnesses : W. W. Meeteer, J. J. Sorogan and C. M. Stillwell, chemist.

CASE No. 226 F.

THE PEOPLE *v.* KEMPSTER.

General Sessions Court, New York.

Before grand jury November twenty-three. Indicted. Called for trial December nineteenth ; adjourned to December twentieth ; tried. Convicted. Fined \$100.

Counsel, District Attorney.

Witnesses : E. S. Wilson, T. C. DuBois and E. G. Love chem st.

CASE No. 233 F.

THE PEOPLE *v.* BAHRUTH.*Tombs Police Court, New York.*

Warrant issued December 23, 1887; answered to December twenty-fourth; adjourned to December twenty-seventh for examination; held to bail for trial at General Sessions; before grand jury January 17, 1888. Indicted. Called for trial January 20, 1888. Pleaded guilty. Sentence suspended.

Counsel, L. S. Gove.

Witnesses: E. S. Wilson, T. R. Gray and E. G. Love, chemist.

CASE No. 234 F.

THE PEOPLE *v.* GREIBE.*Tombs Police Court, New York.*

Warrant issued January 7, 1888; answered to January ninth; held to bail for trial at Special Sessions. Called for trial January sixteenth; tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: E. S. Wilson, T. R. Gray and E. G. Love, chemist.

CASE No. 1421 L.

THE PEOPLE *v.* ROWLEY.*Jefferson Market Police Court, New York.*

Warrant issued December 13, 1887; answered to December fourteenth; held to bail for trial at General Sessions; before the grand jury December sixteenth. Indicted. Case transferred to Special Sessions Court May 10, 1888. Called for trial May twenty-fourth; adjourned to twenty-ninth and tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 1423 I.

THE PEOPLE *v.* VON DOHLIN.

Jefferson Market Police Court, New York.

Warrant issued December 13, 1887; answered to December fourteenth; held to bail for trial at Special Sessions. Called for trial December nineteenth. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, T. R. Gray and J. F. Geisler, chemist.

CASE No. 534 G.

THE PEOPLE *v.* SELL.

Tombs Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; held to bail for trial at Special Sessions. Called for trial January 3, 1888; adjourned to January fourth; to January fifth, and pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: T. R. Gray, E. S. Wilson and J. F. Geisler, chemist.

CASE No. 535 G.

THE PEOPLE *v.* DEMOREST.

Tombs Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; held to bail for trial at General Sessions; before grand jury January 26, 1888. Indicted. Called for trial February 15, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: T. R. Gray, E. S. Wilson and E. G. Love, chemist.

CASE No. 1231 H.

THE PEOPLE v. GARCIA.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued December 13, 1887; answered to December fourteenth; held to bail for trial at Special Sessions. Called for trial December twentieth, and adjourned to January 5, 1888; to January nineteenth; to twenty-fourth, and dismissed on the ground that the State had no jurisdiction over the sale of oleomargarine on United States government lands.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, T. C. DuBois and J. F. Geisler, chemist.

CASE No. 1232 H.

THE PEOPLE v. KIEHL.

Tombs Police Court, New York.

Warrant issued December 14, 1887; answered to December fifteenth; held to bail for trial at General Sessions; before grand jury December twenty-second. Indicted. Called for trial May 10, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, T. C. DuBois and E. G. Love, chemist.

CASE No. 894 D.

THE PEOPLE v. HEDT.

Yorkville Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; adjourned to December thirty-first; held to bail for trial at Special Sessions. Called for trial January 5, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. J. Sorogan, T. R. Gray and J. F. Geisler, chemist.

CASE No. 896 D.

THE PEOPLE *v.* KIRBY.

Jefferson Market Police Court, New York.

Warrant issued January 5, 1888; answered to January seventh; held to bail for trial at Special Sessions. Called for trial January eleventh. Pled guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. J. Sorogan, T. R. Gray and E. G. Love, chemist.

CASE No. 1230 H.

THE PEOPLE *v.* HAGGERTY.

Tombs Police Court, New York.

Warrant issued December 27, 1887; answered to December twenty-ninth; held to bail for trial at General Sessions; before grand jury January seventeenth. Indicted. Called to trial February twenty-eighth; adjourned to April thirtieth. Pled guilty. Sentence suspended.

Counsel, Chas. B. Olendorf.

Witnesses: W. W. Meeteer, T. O. Du Bois and J. F. Geisler, chemist.

CASE No. 153 J.

THE PEOPLE *v.* VANDINE.

Tombs Police Court, New York.

Warrant issued December 28, 1887; answered to December thirtieth; held to bail for trial at Special Sessions. Called for trial January 5, 1888; adjourned to January eleventh; to sixteenth, and pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. O. DuBois, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 151 J.

THE PEOPLE *v.* LOEPZ.*Tombs Police Court, New York.*

Warrant issued December 28, 1887; answered to December thirtieth; held to bail for trial at Special Sessions. Called for trial January 5, 1888; adjourned to January eleventh, and tried. Convicted. Fined seventy-five dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. C. DuBois, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 152 J.

THE PEOPLE *v.* RYAN.*Tombs Police Court, New York.*

Warrant issued January 4, 1888; answered to January seventh; held to bail for trial at Special Sessions. Called for trial January eleventh; tried. Convicted. Fined seventy-five dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. C. DuBois, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 893 D.

THE PEOPLE *v.* YEAGER.*Yorkville Police Court, New York.*

Warrant issued December 28, 1887; answered to December twenty-ninth; adjourned to December thirty-first, and held to bail for trial at Special Sessions. Case called January 9, 1888; tried. Convicted. Fined, fifty dollars.

Counsel, L. S. Gove.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. G. Love, chemist.

CASE No. 537 G.

THE PEOPLE v. BURKE.

Yorkville Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; adjourned to thirty-first; held to bail for trial at Special Sessions. Called for trial January 5, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: T. R. Gray, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 538 G.

THE PEOPLE v. LAKE.

Yorkville Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; adjourned to December thirty-first; held to bail for trial at Special Sessions. Called for trial January 9, 1888; adjourned to January sixteenth. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. B. Olendorf.

Witnesses: T. R. Gray, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 539 G.

THE PEOPLE v. ZIMMERER.

Tombs Police Court, New York.

Warrant issued December 28, 1887; answered to December twenty-ninth; held to bail for trial at Special Sessions. Called for trial January 5, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: T. R. Gray, J. J. Sorogan and E. G. Love, chemist.

CASE No. 536 G.

THE PEOPLE v. ORTHLIEB.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued January 4, 1888; answered to January sixth, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and J. F. Geisler, chemist.

CASE No. 1233 H.

THE PEOPLE v. YATES.

Jefferson Market Police Court New York.

Warrant issued January 13, 1888; answered to January eighteenth; held to bail for trial at Special Sessions. Called for trial February first; adjourned to February eighth, and pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: W. W. Meeteer, J. J. Sorogan and O. M. Stillwell, chemist.

CASE No. 1225 H.

THE PEOPLE v. KLIEFOTH.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued December 29, 1887; answered to December thirtieth; held to bail for trial at Special Sessions. Called for trial January 6, 1888; adjourned to January sixteenth. Pled guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, A. D. Clark and J. F. Geisler, chemist.

CASE No. 1224 H.

THE PEOPLE v. RIEBESEHL.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued December 29, 1887; answered to December thirtieth; held to bail for trial at Special Sessions. Called for trial January 6, 1888; tried. Convicted. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, A. D. Clark and J. F. Geisler, chemist.

CASE No. 1226 H.

THE PEOPLE v. SEABURGH.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued December 29, 1887; answered to January 3, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, A. D. Clark and J. F. Geisler, chemist.

CASE No. 154 J.

• THE PEOPLE v. LAUTIER.

Justice Cavanaugh's Police Court, Long Island City, N. Y.

Warrant issued January 10, 1888; answered to January 10, 1888; held to bail for trial January thirty-first; adjourned to February seventh, and tried by jury. Acquitted.

Counsel, A. C. Salmon.

Witnesses: T. C. DuBois, W. W. Meeteer and C. H. Stillwell, chemist.

CASE No. 897 D.

THE PEOPLE *v.* KENNEY.*Jefferson Market Police Court, New York.*

Warrant issued January 5, 1888 ; answered to January seventh ; held to bail for trial at Special Sessions. Called for trial January eleventh ; adjourned to January nineteenth. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses : J. J. Sorogan, Arch. D. Clark and C. M. Stillwell chemist.

CASE No. 1223 H.

THE PEOPLE *v.* SMITH.*Harlem Police Court, New York.*

Warrant issued December 29, 1887 ; answered to December thirtieth ; held to bail for trial at Special Sessions. Called for trial January 5, 1888 ; adjourned to January eleventh. Pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses : W. W. Meeteer, J. J. Sorogan and J. F. Geisler, chemist.

CASE No. 1228 H.

THE PEOPLE *v.* LAKE.*Harlem Police Court, New York.*

Warrant issued December 29, 1887 ; answered to December thirtieth ; held to bail for trial at General Sessions, before grand jury, January 10, 1888. Indicted. Called for trial January seventeenth ; adjourned indefinitely.

Case called April thirtieth ; adjourned to May tenth ; to twenty-eighth ; to June sixth and bail forfeited.

Counsel, Charles D. Olendorf.

Witnesses : W. W. Meeteer, A. D. Clark and J. F. Geisler, chemist.

CASE No. 1422 I.

THE PEOPLE *v.* BRANDT.

Tombs Police Court, New York.

Warrant issued December 30, 1887; answered to December thirtieth; held to bail for trial at Special Sessions. Called for trial January 5, 1888. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: J. R. Wheeler, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 1234 H.

THE PEOPLE *v.* REMMELE.

Tombs Police Court, New York.

Warrant issued January 3, 1888; answered to January fourth; held to bail for trial at Special Sessions. Called for trial January ninth; adjourned to January eighteenth. Pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: W. W. Meeteer, T. C. DuBois and C. M. Stillwell, chemist.

CASE No. 541 G.

THE PEOPLE *v.* RAAB.

Jefferson Market Police Court, New York.

Warrant issued January 5, 1888; answered to January ninth; held to bail for trial at Special Sessions. Called for trial January eleventh; adjourned to January nineteenth, and pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. J. Sorogan and R. W. Moore, chemist.

CASE No. 155 J.

THE PEOPLE *v.* PETZOLD.*Tombs Police Court, New York.*

Warrant issued January 4, 1888 ; answered to January fifth ; held to bail for trial at Special Sessions. Called for trial January eleventh. Pled guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses : T. C. DuBois, W. W. Meeteer and C. M. Stillwell, chemist.

CASE No. 156 J.

THE PEOPLE *v.* NEISS.*Tombs Police Court, New York.*

Warrant issued January 4, 1888 ; answered to January sixth ; held to bail for trial at Special Sessions. Called for trial January eleventh ; adjourned to January twelfth. Pled guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver,

Witnesses : T. C. DuBois, W. W. Meeteer and R. W. Moore, chemist.

CASE No. 898 D.

THE PEOPLE *v.* SCHAWER.*Jefferson Market Police Court, New York.*

Warrant issued January 5, 1888 ; answered to January seventh ; held to bail for trial at Special Sessions. Called for trial January tenth, and tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses : J. J. Sorogan, T. R. Gray and E. G. Love, chemist.

CASE No. 1059 K.

THE PEOPLE *v.* CAIRNS.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued January 6, 1888; answered to January ninth; held to bail for trial at Special Sessions. Called for trial January seventeenth. Pleaded guilty. Fined fifty dollars.

Counsel, A. O. Salmon.

Witnesses: Arch. D. Clark, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 1062 K.

THE PEOPLE *v.* REICHELDMANN.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued January 6, 1888; answered to January ninth, and pleaded guilty. Fined fifty dollars.

Council, A. O. Salmon.

Witnesses: Arch. D. Clark, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 1063 K.

THE PEOPLE *v.* DUGAN.

Harlem Police Court, New York.

Warrant issued January 11, 1888; answered to January twelfth; held to bail for trial at Special Sessions. Called for trial January eighteenth; adjourned to January twenty-fifth, and tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: Arch. D. Clark, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 1064 K.

THE PEOPLE *v.* CHICHESTER.*Harlem Police Court, New York.*

Warrant issued January 11, 1888 ; answered to January twelfth ; held to bail for trial at Special Sessions. Called for trial January eighteenth ; adjourned to January twenty-fifth, and tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses : A. D. Clark, W. W. Meeteer and J. F. Geisler, chemist.

CASE No. 895 D.

THE PEOPLE *v.* BRANCKHOFF.*Harlem Police Court, New York.*

Warrant issued January 11, 1888 ; answered to January thirteenth ; held to bail for trial at Special Sessions. Called for trial January twenty-fifth. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses : J. J. Sorogan, T. R. Gray and C. M. Stillwell, chemist.

CASE No. 1129 H.

THE PEOPLE *v.* COOGAN.*Tombs Police Court, New York.*

Warrant issued January 10, 1888 ; answered to January eleventh ; held to bail for trial at Special Sessions. Called for trial January sixteenth. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses : W. W. Meeteer, J. J. Sorogan and E. G. Love, chemist.

CASE No. 542 G.

THE PEOPLE *v.* LA ROSE.

Essex Market Police Court, New York.

Warrant issued January 12, 1888; answered to January sixteenth; held to bail for trial at Special Sessions. Called for trial January twenty-three. Pleaded guilty. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: T. R. Gray, J. J. Sorogan and R. W. Moore, chemist.

CASE No. 1236 H.

THE PEOPLE *v.* SCHOONMAKER.

Jefferson Market Police Court, New York.

Warrant issued January 13, 1888; answered to January fourteenth; held to bail for trial at Special Sessions. Called for trial January eighteen. Pleaded guilty. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: W. W. Meeteer, T. C. DuBois and J. F. Geisler, chemist.

CASE No. 899 D.

THE PEOPLE *v.* HAGGERTY.

Tombs Police Court, New York.

Warrant issued January 16, 1888; answered to January seventeenth; held to bail for trial at General Sessions, before grand jury February eighth. Indicted. Called for trial April thirtieth. Pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. J. Sorogan, T. R. Gray and R. W. Moore, chemist.

CASE No. 1501 D.

THE PEOPLE *v.* FOY.*Jefferson Market Police Court, New York.*

Warrant issued February 7, 1888; answered to February eighth; held to bail for trial at Special Sessions. Called for trial February thirteenth; adjourned to twentieth, and tried. Convicted. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses: J. J. Sorogan and R. W. Moore, chemist.

CASE No. 234 F.

THE PEOPLE *v.* BUEL.*Tombs Police Court, New York.*

Warrant issued December 23, 1887.; answered to December twenty-fourth; adjourned to December twenty-seventh; examination held, and complaint withdrawn, not being proprietor, and warrant issued for the proprietor.

Counsel, L. S. Gove.

Witnesses: E. S. Wilson, T. R. Gray and E. G. Love, chemist.

CASE No. 1437 L

THE PEOPLE *v.* SCHWENKE.*Yorkville Police Court, New York.*

Warrant issued March 1, 1888; answered to March second; held to bail for trial at General Sessions.

Counsel, Charles D. Olendorf.

Witnesses: J. R. Wheeler, E. S. Wilson and R. W. Moore, chemist.

CASE No. 238 F.

THE PEOPLE *v.* SCHOTT.*Jefferson Market Police Court, New York.*

Warrant issued February 7, 1888; answered to February fourteenth; adjourned to February twentieth, to twenty-seventh; held to bail for trial at Special Sessions. Called to trial March fifth;

adjourned to March twelfth, to sixteenth, to March twenty-seventh, and tried. Convicted. Fined fifty dollars.

Counsel, F. V. S. Oliver.

Witnesses : E. S. Wilson, J. R. Wheeler and E. G. Love, chemist.

CASE No. 159 J.

THE PEOPLE *v.* FEEHEM.

Tombs Police Court, New York.

Warrant issued January 14, 1888; answered to January fifteenth; held to bail for trial at Special Sessions. Case called for trial January twenty-third; adjourned to January thirtieth. Pled guilty. Fined \$100.

Counsel, F. V. S. Oliver.

Witnesses : T. C. DuBois, T. R. Gray and R. W. Moore, chemist.

CASE No. 1439 I.

THE PEOPLE *v.* MIGNOWITZ.

Tombs Police Court, New York.

Warrant issued January 30, 1888; answered to January thirty-first; held to bail for trial at General Sessions; before grand jury February thirteenth. Indicted. Called for trial February sixteenth; adjourned to twenty-eighth; to April thirtieth; adjourned indefinitely.

Counsel, Chas. D. Olendorf.

Witnesses : J. R. Wheeler, T. R. Gray, A. Hall and Russell W. Moore, chemist.

CASE No. 1438 I.

THE PEOPLE *v.* EISLER.

Yorkville Police Court, New York.

Warrant issued March 1, 1888; answered to March second; held to bail for trial at Special Sessions. Called for trial March eighth; adjourned to sixteenth. Pled guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses : J. R. Wheeler, T. R. Gray and R. W. Moore, chemist.

CASE No. 1440 I.

THE PEOPLE *v.* ADLER.*Harlem Police Court, New York.*

Warrant issued March 28, 1888; answered to March twenty-ninth; held to bail for trial at General Sessions.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, F. Hoffman, T. R. Gray and R. W. Moore, chemist.

CASE No. 243 F.

THE PEOPLE *v.* MERRILL.*Justice Alston's Police Court, Port Richmond, Staten Island, N. Y.*

Warrant issued May 18, 1888; answered to May twenty-third; adjourned to May twenty-fourth; to May twenty-eighth for examination; held to bail for trial at Special Sessions. Called for trial June 4, 1888; adjourned to June sixth, and tried by jury. Acquitted.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

CASE No. 239 F.

THE PEOPLE *v.* LEONARD.*Justice Naehar's Police Court, Brooklyn, N. Y.*

Warrant issued April 21, 1888; answered to April twenty-third; held to bail for trial at Special Sessions. Called for trial April thirtieth; adjourned to May fifteenth; to twenty-second, and pleaded guilty. Fined fifty dollars. Fine remitted by county judge.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

CASE No. 543 G.

THE PEOPLE *v.* DOUGHERTY.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 21, 1888; answered to April twenty-first; held to bail for trial at Special Sessions. Called for trial May fourth. Pled guilty. Fined \$100.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 545 G.

THE PEOPLE *v.* KOZIMINSKI.

Justice Alston's Police Court, Port Richmond, Staten Island, N. Y.

Warrant issued April 25, 1888; answered to May second; held to bail for trial at Special Sessions. Called for trial May sixteenth; adjourned to June sixth, and complaint withdrawn by advice of counsel.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 544 G.

THE PEOPLE *v.* SCHMIEGLOW.

Justice Corbett's Police Court, Staten Island, N. Y.

Warrant issued April 24, 1888; answered to April twenty-fifth; held to bail for trial at Special Sessions. Called for trial May first; adjourned to May fourteenth; to thirty-first, and complaint withdrawn by advice of counsel.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 546 G.

THE PEOPLE *v.* MEHLMANN.

Justice Alston's Police Court, Port Richmond, Staten Island, N. Y.

Warrant issued April 25, 1888; answered to May second; held to bail for trial at Special Sessions. Called for trial May sixteenth; adjourned to twenty-third; to twenty-ninth, and tried by jury. Acquitted.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 245 F.

THE PEOPLE *v.* MCGUIRE.

Justice Corbett's Police Court, Staten Island, N. Y.

Warrant issued April 24, 1888; answered to May first; held to bail for trial May fourteenth; adjourned to twenty-fourth; to thirty-first, and complaint withdrawn by advice of council.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

CASE No. 246 F.

THE PEOPLE *v.* JANSEN.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued May 4, 1888; answered to May seventeenth; held to bail for trial at Special Sessions. Called for trial May thirty-first, and tried by jury. Convicted. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

CASE No. 549 G.

THE PEOPLE *v.* BERGER.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued May 12, 1888; answered to May fifteenth; held to bail for trial at Special Sessions. Called for trial May twenty-

fifth; adjourned to June fifth, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 241 F.

THE PEOPLE v. WYGANT.

Justice Corbett's Police Court, Staten Island, N. Y.

Warrant issued April 24, 1888; answered to April twenty-fifth; held to bail for trial at Special Sessions. Called for trial May first, and adjourned to May fourteenth. Tried by jury and acquitted.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

CASE No. 547 G.

THE PEOPLE v. MANLEY.

Justice Alston's Police Court, Port Richmond, Staten Island, N. Y.

Warrant issued May 10, 1888; answered to May sixteenth; held to bail for trial at Special Sessions. Called for trial May twenty-third; adjourned to twenty-eighth; to June sixth, and complaint withdrawn by advice of counsel.

Counsel, Charles D. Olendorf.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 548 G.

THE PEOPLE v. KRUKOWSKY.

Justice Alston's Police Court, Port Richmond, Staten Island, N. Y.

Warrant issued May 18, 1888; answered to May twenty-third; adjourned to May twenty-eighth; to June sixth, and complaint withdrawn by advice of counsel.

Counsel, Charles D. Olendorf.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

CASE No. 1065 K.

THE PEOPLE *v.* NEFF.*Tombs Police Court, New York.*

Warrant issued June 8, 1888; answered to June eighth; adjourned to June eleventh for examination, and held to bail for trial at General Sessions.

Counsel, Charles D. Olendorf.

Witnesses: Arch. D. Clark, W. W. Meeteer and R. W. Moore, chemist.

CASE No. 1237 H.

THE PEOPLE *v.* HARTMAN.*Tombs Police Court, New York.*

Warrant issued June 11, 1888; answered to June thirteenth; held to bail for trial at Special Sessions.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, A. D. Clark and R. W. Moore, chemist.

CASE No. 1238 H.

THE PEOPLE *v.* HARLAND.*Tombs Police Court, New York.*

Warrant issued June 11, 1888; answered to June thirteenth; held to bail for trial at Special Sessions.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, A. D. Clark and R. W. Moore, chemist.

CASE No. 550 G.

THE PEOPLE *v.* WEISLEY.*Justice Kenna's Police Court, Brooklyn, N. Y.*

Warrant issued July 19, 1888; answered to July twentieth; held to bail for trial at Special Sessions. Called for trial July twenty-seventh; adjourned to October twenty-third.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson and E. G. Love, chemist.

CASE No. 244 F.

THE PEOPLE v. GREENWALD.

Justice Alston's Police Court, Staten Island, N. Y.

Warrant issued May 18, 1888 ; answered to May twenty-third; adjourned to twenty-ninth ; to June sixth, and complaint withdrawn by advice of counsel.

Counsel, A. C. Salmon.

Witnesses : E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

The result of the 110 preceding prosecutions for violations of the oleomargarine law, commenced between October 1, 1887, and September 30, 1888, were as follows :

8	Convicted at General Sessions, fined	\$450
3	Convicted at General Sessions, sentence suspended.	
1	Convicted at General Sessions, sentenced to penitentiary three months.	
1	Acquitted at General Sessions.	
6	Awaiting trial at General Sessions.	
1	Bail forfeited at General Sessions.	
73	Convicted at Special Sessions, fined	3,850
4	Acquitted at Special Sessions.	
1	Dismissed from calendar at Special Sessions.	
3	Awaiting trial at Special Sessions.	
1	Convicted, fine remitted on appeal to County Court.	
6	Complaints withdrawn; reason given in report.	
2	Dismissed on examination, police court.	
110		\$4,300

Of the above 110 case, twelve were stores and ninety-eight were restaurants.

The work performed in this division of the dairy department has not been confined to New York and Brooklyn, but has extended to nearly every city and village in the second division of the department of the Dairy Commission.

During the year covered by this report, the following named cities and towns in this division of the department, outside of Brooklyn and New York, were visited, viz : Yonkers, White Plains,

Melrose, Mount Vernon, Morrisania, Long Island City, Jamaica, Glen Cove, Greenport, Rockaway, Coney Island, Port Richmond and many other towns too numerous to mention.

In all cities and towns visited, the butter in the stores was examined to see whether it was genuine or spurious ; also the milk to see whether the same was pure or adulterated, likewise the milk being distributed by peddlers as well as the milk being delivered at the railroad depots for shipment to New York and Brooklyn. The work of inspecting milk when being delivered from the different railroad depots in New York and Brooklyn has been carefully looked after by the experts under my directions.

This part of the work having to be done between the hours of 11 at night and 6 o'clock in the morning has made it necessary for the experts to do a great deal of night work, and has compelled me to require them to work all night many nights during the year.

When it is considered that there are fifteen depots in New York and Brooklyn at which milk is delivered by common carriers to peddlers and grocers, and that there are hundreds of farmers who come in to the above-named cities and peddle their own milk, entering the cities by a large number of streets and avenues, and that there are over seven thousand stores in the two cities where milk is retailed, aside from the numerous peddlers, it is obvious that the work of supervising and inspecting the milk in this division of the department sufficiently to keep the adulteration under control is enormous, and requires a large force of men to be kept constantly at work.

The following tables give a detailed report of work performed by each employé in this division of the department between September 30, 1887, and September 30, 1888, in enforcing the laws relating to the sale of adulterated milk :

William W. Meeteer, expert, employed in the above service 152 days:

Number of days in court.	49
Number of days inspecting milk.	85
Number of days obtaining evidence	3
Number of days on special duty	11
Number of days inspecting herds.	4
Total number of days.	<u>152</u>

<i>NEW YORK STATE DAIRY COMMISSIONER.</i>	539
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Number of creameries inspected as to condition.....	32
Number of stores inspected.....	438
Number of dairies' milk inspected on delivery at creameries and railroad depots.....	984
Number of peddlers' milk inspected.....	132
Number of stables inspected.....	6
Number of cows inspected.....	84
Total number of milk inspections.....	7,708
Total number of samples delivered to chemists.....	44
Total number of complaints made.....	23
Total number of appearances in cases.....	142
Estimated number of miles traveled.....	6,336

Thomas R. Gray, expert, employed in the above services 133 days :

Number of days in court.....	36
Number of days inspecting milk.....	87
Number of days obtaining evidence.....	9
Number of days on special duty.....	1
Total number of days.....	133

Number of creamerymen's milk inspected on delivery at railroad depots.....	43
Number of creameries inspected as to condition.....	24
Number of stores inspected.....	751
Number of dairies' milk inspected on delivery at creameries and railroad depots.....	711
Number of peddlers' milk inspected.....	296
Number of stables inspected.....	10
Number of cows inspected.....	529
Total number of milk inspections.....	4,493
Total number of samples delivered to chemists.....	33
Total number of complaints made.....	24
Total number of appearances in cases.....	92
Estimated number of miles traveled.....	7,827

Archibald D. Clark, expert, employed in the above service 153 days :

Number of days in court.....	49
Number of days inspecting milk.....	58
Number of days obtaining evidence	12
Number of days on special duty	34
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Total number of days.....	153
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Number of creameries inspected as to condition	7
Number of stores inspected	445
Number of dairies' milk inspected on delivery at creameries and railroad depots.....	186
Number of peddlers' milk inspected.....	104
Total number of milk inspections	2,797
Total number of samples delivered to chemists.....	22
Total number of complaints made.....	10
Total number of appearances in cases.....	81
Estimated number of miles traveled.....	5,640
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Thomas C. DuBois, expert, employed in the above service thirty days :

Number of days in court.....	10
Number of days inspecting milk.....	12
Number of days obtaining evidence	8
	<hr/>
Total number of days.....	30
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Number of stores inspected	123
Number of peddlers' milk inspected.....	180
Total number of milk inspections.....	2,305
Total number of samples delivered to chemists.....	7
Total number of complaints made.....	4
Total number of appearances in cases.....	20
Estimated number of miles traveled.....	1,235
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Joseph J. Sorogan, expert, employed in the above service 162 days :

Number of days in court.....	44
Number of days inspecting milk.....	80
Number of days obtaining evidence.....	18
Number of days on special duty.....	19
Number of days inspecting herds.....	1

Total number of days	<u>162</u>
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Number of creameries inspected as to condition.....	59
Number of stores inspected	433
Number of dairies' milk inspected on delivery at creameries and railroad depots	1,242
Number of peddlers' milk inspected	119
Number of stables inspected	1
Number of cows inspected	12
Total number of milk inspections.....	4,457
Total number of samples delivered to chemists.....	33
Total number of complaints made	23
Total number of appearances in cases.....	137
Estimated number of miles traveled	<u>9,847</u>

Edmund S. Wilson, expert, employed in the above service 144 days :

Number of days in court	43
Number of days inspecting milk.....	92
Number of days obtaining evidence.....	3
Number of days inspecting herds.....	6

Total number of days	<u>144</u>
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Number of creameries inspected as to condition.....	74
Number of stores inspected	237
Number of dairies' milk inspected at delivery at creameries and railroad depots	977
Number of peddlers' milk inspected.....	59
Number of stables inspected	16

Number of cows inspected	443
Total number of milk inspections	4,980
Total number of samples delivered to chemists	32
Total number of complaints made	20
Total number of appearances in cases	65
Estimated number of miles traveled	9,713

Jedediah R. Wheeler, expert, employed in the service thirty-two days :

Number of days in court	17
Number of days inspecting milk	14
Number of days inspecting herds	1

Total number of days	32
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Number of stores inspected	799
Number of peddlers' milk inspected	6
Number of stables inspected	6
Number of cows inspected	255
Total number of milk inspections	1,067
Total number of samples delivered to chemists	13
Total number of complaints made	10
Total number of appearances in cases	53
Estimated number of miles traveled	1,850

William S. O. Brien, expert, employed in the above service one month :

Number of days in court	1
Number of days inspecting milk	12
Number of days obtaining evidence	6
Number of days on special duty	6

Total number of days	25
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Number of creamerymen's milk inspected on delivery at railroad depots	1
Number of stores inspected	179
Number of dairies' milk inspected on delivery at cream- eries and railroad depots	0

<i>NEW YORK STATE DAIRY COMMISSIONER.</i>	543
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Number of peddlers' milk inspected.....	57
Total number of milk inspections	435
Total number of samples delivered to chemists.....	4
Total number of complaints made.....	1
Total number of appearances in cases	1
Estimated number of miles traveled	900

Russell W. Moore, A. M., M. Sc.:

Number of analyses of milk samples.....	170
Number of appearances in cases.....	106
Number of days in court.....	61

Joseph F. Geisler, Ph. C.:

Number of analyses of milk samples.....	27
Number of appearances in cases.....	22
Number of days in court.....	12

Edward G. Love, Ph. D.:

Number of analyses of milk samples.....	16
Number of appearances in cases.....	1
Number of days in court.....	1

Charles M. Stillwell, A. M., and Thomas G. Gladding, A. M.:

Number of analyses of milk samples.....	9
Number of appearances in cases.....	....
Number of days in court.....	....

Arthur C. Salmon, counsel:

Number of cases prosecuted.....	22
Number of cases disposed of.....	22
Number of convictions	19
Number of acquittals.....	2
Number dismissed from calendar.....	1
Number of appearances in cases.....	44
Number of days in court.....	44
Number of cases bailed to Special Sessions.....	22
Amount of fines imposed	\$550

Charles D. Olendorf, counsel :

Number of cases prosecuted	39
Number of cases disposed of	40
Number of convictions	39
Number of acquittals	1
Number of appearances in cases	57
Number of days in court	32
Number of cases bailed to Special Sessions	39
Amount of fines imposed	<u>\$1,250</u>

Francis V. S. Oliver, counsel :

Number of cases prosecuted	5
Number of cases disposed of	3
Number of convictions	3
Number dismissed on examination	1
Number of appearances in cases	15
Number of days in court	15
Number of cases bailed to Special Sessions	5
Amount of fines imposed	<u>\$75</u>

TOTAL (*Milk*).

Number of days (experts)	831
Number of days in court	414
Number of days inspecting milk	440
Number of days obtaining evidence	59
Number of days on special duty	71
Number of days inspecting herds	12
Number of milk inspections	28,242
Number of dairies' milk inspected	4,100
Number of stores inspected	3,405
Number of peddlers' milk inspected	853
Number of creamerymen's milk inspected	43
Number of creameries inspected as to condition	196
Number of stables inspected	39
Number of cows inspected	1,323
Number of samples delivered to chemists	188
Number of complaints made	115
Number of appearances in cases	836
Number of cases bailed to Special Sessions	112
Number of cases bailed to General Sessions	2

NEW YORK STATE DAIRY COMMISSIONER. 545

Number of cases prosecuted	114
Number of cases disposed of.....	135
Number of convictions.....	128
Number of acquittals.....	3
Number of cases dismissed on examination.....	2
Number of cases dismissed from calendar	1
Number of cases not disposed of... ..	8
Estimated number of miles traveled	43,348
Amount of fines imposed.....	<u>\$3,820</u>

Between September 30, 1887, and September 30, 1888, the milk shipped from forty-three creameries was inspected, comprising 1,720 cans. By lactometer tests, 1,719 cans were found to be standard, and one can was slightly below the standard required.

During the same period 4,101 dairies was inspected, comprising 12,890 cans of milk. The lactometer test showed 12,814 cans to be standard, and seventy-six cans slightly below the required standard, and was marked doubtful on the ticket given to the producers.

Within the same period 948 peddlers' milk was inspected, comprising 8,961 cans, of which 8,887 were shown by lactometer test to be standard, and seventy-four cans by same test were below the line of standard quality, and marked doubtful on the tickets given to the vender.

Within the same period 3,405 stores were inspected, comprising 4,671 cans of milk. By the lactometer test 4,532 cans proved to be standard, and 139 cans to be below the line of standard quality.

The preceding statements gives the number of cans of milk that were, by lactometer, apparently, slightly below the standard, which shows the following percentages :

	Cans.	Per cent.	Cans.
43 Creamerymen's milk.....	1,720..	1-17 doubtful or	1
4,101 Farmers' milk.....	12,890..	3-5 doubtful or	76
948 Peddlers' milk.....	8,961..	7-8 doubtful or	74
3,405 Stores' milk.....	4,671..	3 doubtful or	139

Total milk inspected 28,242 cans of which 290 cans showed by the lactometer slight indications of adultera-

tion on the part of the creamerymen and farmers ; the peddlers' milk proved much less adulterated than in the previous year ; also the grocers' milk, while showing much better than in 1887, had a much larger percentage of adulteration as to number of samples, as well as a greater percentage of adulteration to the sample, than the creamerymen, farmers or peddlers.

The result of these inspections has proved very satisfactory, showing that by lactometer test less than one per cent of farmers, creamerymen and peddlers' milk showed adulteration, while the milk sold by grocers showed three per cent ; although some samples of milk passed as standard, may have been slightly adulterated, but not enough to bring it below the lowest point allowed under the law ; the percentage of samples found to be below the standard, by the test applied, have been very slight, indeed, as compared with the entire amount inspected.

After summing up the work performed in the second division of the dairy department, under my supervision, I am pleased to be able to state, that there is a marked improvement over the previous year.

Oleomargarine has required less attention to keep it under control, therefore, I have had more opportunity to look after adulterated milk. It seems that it is necessary to be continually on the watch for violations of the law by adulteration of this very necessary article of food ; the dealers in milk seem to keep a close watch of the movements of the experts, and when they are in the cities refrain to a great extent from adulterating their milk. But whenever our vigilance is for any reason relaxed, adulteration increases to an astonishing extent ; this was the case when a large share of the force was withdrawn during August and September last, for duty in the interior. During the first two summer months the ratio of adulterated milk, as compared to the amount of pure milk found in New York and Brooklyn, was very small, but after a large share of the force had been withdrawn from this division for duty in the interior of the State, the inspections made by the experts remaining in this division during August and September showed a gradual increase in the adulteration of milk, and when the experts, who had been absent during the above-named period returned, on October first, and got to work again in this city and

Brooklyn, there was about as much adulterated milk found as at any time since the Commission commenced to look after adulterations of milk in the cities.

This demonstrates the necessity of keeping a full force continually at work in order to keep this nefarious practice of adulterating milk under control.

The status of the following twenty-nine prosecutions for violation of the law relating to adulterated milk was fully stated to you in my fourth annual report; the final disposition of them is given in the annexed table:

DISPOSITION OF PROSECUTIONS.

Case No.	NAMES.	Called for trial.	Court.	Result.	Fined.	Remarks.
49	The People v. Timoney	1887.	General Sessions, New York.....	Pleaded guilty.....	\$25 00	
53	The People v. Crune.....	December 22	Special Sessions, New York.....	Pleaded guilty.....	100 00	
57	The People v. Schmelke.....	November 1	Special Sessions, New York.....	.....	.....
		November 6				
59	The People v. Dennis	1888.	General Sessions, New York.....	Pleaded guilty.....	.....	Sentence suspended.
83	The People v. Dennis	January 20	General Sessions, New York.....	Pleaded guilty.....	.....	Sentence suspended.
		January 19				
		1887.				
187	The People v. Downs	November 14	Special Sessions, New York.....	Pleaded guilty.....	25 00	
181	The People v. Kaplan.....	November 18	Special Sessions, New York.....	Pleaded guilty.....	25 00	
186	The People v. Eden.....	November 1	Special Sessions, New York.....	Pleaded guilty.....	25 00	
141	The People v. Seaman.....	November 14	Special Sessions, New York.....	Pleaded guilty.....	50 00	
157	The People v. Hulle	November 1	Special Sessions, New York.....	Pleaded guilty.....	25 00	
437	The People v. Levy	November 18	Special Sessions, New York.....	Pleaded guilty.....	25 00	
439	The People v. Oppenheimer	November 21	Special Sessions, New York.....	Pleaded guilty.....	25 00	
176	The People v. O'Brien	October 25	Special Sessions, Yonkers	Convicted	50 00	
177	The People v. O'Brien	November 14	Special Sessions, New York.....	Pleaded guilty.....	25 00	
176	The People v. Schnelder	November 1	Special Sessions, New York.....	Pleaded guilty.....	50 00	
425	The People v. Satenstein	November 18	Special Sessions, New York.....	Pleaded guilty.....	25 00	
437	The People v. Harrison.....	November 1	Special Sessions, New York.....	Pleaded guilty.....	25 00	
73	The People v. Rogers	November 15	Special Sessions, Brooklyn	Convicted	50 00	
113	The People v. Kehoe	November 10	Special Sessions, New York.....	Pleaded guilty.....	25 00	
191	The People v. Scheer	October 31	Special Sessions, Brooklyn	Pleaded guilty.....	25 00	
189	The People v. Schwarz	October 31	Police Court, Brooklyn.....	.....	.....
169	The People v. Vazte	October 10	Special Sessions, Brooklyn .....	.....	25 00	
163	The People v. Furst	October 17	Special Sessions, Brooklyn .....	.....	.....
453	The People v. Meyerholz.....	November 14	Special Sessions, New York.....	.....	50 00	
455	The People v. Cleary	November 1	Special Sessions, New York.....	.....	25 00	
441	The People v. Valpe	December 1	Special Sessions, New York.....	Pleaded guilty.....	25 00	
51	The People v. Tilley .....	.....	General Sessions, New York.....	Pleaded guilty.....	.....
449	The People v. Hueg	November 1	Special Sessions, New York.....	Pleaded guilty.....	50 00	
104	The People v. Marvin	October 7	Police Court, New York	Dismissed.....	.....
					\$775 00	

The foregoing statement, representing twenty-nine cases remaining untried, as reported to you September 30, 1887, for violating the law relating to adulterated milk, shows the following result :

1	Convicted on trial in General Sessions, fined.....	\$25
2	Pleaded guilty on trial in General Sessions, sentence suspended.	
1	Awaiting trial in General Sessions.	
3	Convicted on trial in Special Sessions, fined.....	125
18	Pleaded guilty on trial in Special Sessions, fined....	625
1	Acquitted on trial in Special Sessions.	
1	Awaiting trial.	
2	Were dismissed on examination in police court.	
<hr/> 29		<hr/> \$775

The following statement represents prosecutions during the year ending September 30, 1888, for violation of chapter 183, Laws of 1885, as amended by chapter 550, Laws of 1888, relating to adulterated milk, and the present status of the cases :

BOTTLE No. 35.

THE PEOPLE *v.* CARR.

Harlem Police Court, New York.

Warrant issued October 7, 1887 ; answered to October eighth ; held to bail for trial at Special Sessions. Called for trial November first. Pleaded guilty. Fined fifty dollars.

Witnesses : J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 37.

THE PEOPLE *v.* LANKENAN.

Harlem Police Court, New York.

Warrant issued October 7, 1887 ; answered to October eleventh ; held to bail for trial at Special Sessions. Called for trial October twenty-eighth. Pleaded guilty. Fined twenty-five dollars.

Witnesses : J. J. Sorogan, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 429.

THE PEOPLE *v.* CORBELL.*Essex Market Police Court, New York.*

Warrant issued December 9, 1887; answered to December twelfth: held to bail for trial at General Sessions; before grand jury December sixteenth. Indicted. Case transferred to Special Sessions on May 10, 1888; set for trial May seventeenth; adjourned to May twenty-ninth, and dismissed.

Counsel, L. S. Gove.

Witnesses: J. R. Wheeler, T. R. Gray and E. Waller, chemist.

BOTTLE No. 23.

THE PEOPLE *v.* HULL.*Tombs Police Court, New York.*

Warrant issued October 10, 1887; answered to October eleventh; held to bail for trial at Special Sessions. Called for trial November second. Pleaded guilty. Fined twenty-five dollars.

Counsel, F. V. S. Oliver.

Witnesses: E. S. Wilson, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 103.

THE PEOPLE *v.* WATERMANN.*Harlem Police Court, New York.*

Warrant issued October 11, 1887; answered to October eleventh; held to bail for trial at Special Sessions. Set for trial October twenty-eighth; adjourned to November fourth. Pleaded guilty. Fined \$100.

Counsel, F. V. S. Oliver.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 463.

THE PEOPLE *v.* HAENIG.

Justice Naeher's Police Court, Brooklyn, N. Y.

Warrant issued November 18, 1887; answered to November nineteenth; held to bail for trial at Special Sessions. Set for trial December fifth, and case withdrawn.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 465.

THE PEOPLE *v.* SPORCH.

Justice Naeher's Police Court, Brooklyn, N. Y.

Warrant issued November 30, 1887; answered to December second; held to bail for trial at Special Sessions. Set for trial December twelfth, and case called. Pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 469.

THE PEOPLE *v.* HESS.

Justice Naeher's Police Court, Brooklyn, N. Y.

Warrant issued November 18, 1887; answered to November nineteenth. Pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 483.

THE PEOPLE *v.* BLOCK.

Justice Naeher's Police Court, Brooklyn, N. Y.

Warrant issued November 30, 1887; answered to December first. Pleaded guilty. Fined twenty-five dollars.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 487.

THE PEOPLE *v.* HUBER.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November twenty-second; held to bail for trial at Special Sessions. Called for trial November thirtieth; adjourned to December eighth.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 489.

THE PEOPLE *v.* BREDE.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November twenty-third, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. R. Gray, E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 595.

THE PEOPLE *v.* LYNCH.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November twenty-second, and pleaded guilty.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 467.

THE PEOPLE *v.* PUVOGEL.*Justice Naehar's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November nineteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 519.

THE PEOPLE *v.* WISHMEYER.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued November 18, 1887; answered to November nineteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. C. DuBois, E. S. Wilson and E. Waller, chemist.

BOTTLE No. 85.

THE PEOPLE *v.* BRAGAW.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued October 12, 1887; answered to October seventeenth; held to bail for trial at Special Sessions. Called for trial November twenty-first. Pled guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 517.

THE PEOPLE *v.* STADELMANN.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued November 18, 1887; answered to November nineteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. C. DuBois, E. S. Wilson and E. Waller, chemist.

BOTTLE No. 461.

THE PEOPLE *v.* O'BRIEN.

Justice Kavanaugh's Police Court, Long Island City, N. Y.

Warrant issued December 8, 1887; answered to December ninth; held to bail for trial at Special Sessions on December twentieth. Adjourned to twenty-ninth; to January 10, 1888, and tried by jury. Acquitted.

Counsel, A. C. Salmon.

Witnesses: T. C. DuBois, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 515.

THE PEOPLE *v.* COLLINS.*Justice Naeher's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November twenty-second. Pled guilty. Fined twenty-five dollars.

Witnesses: T. C. DuBois, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 513.

THE PEOPLE *v.* MEYER.*Justice Kenna's Police Court, Brooklyn, N. Y.*

Warrant issued December 1, 1887; answered to December second. Pled guilty. Fined twenty-five dollars.

Witnesses: T. C. DuBois, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 109.

THE PEOPLE *v.* JUDSON.*Justice Naeher's Police Court, Brooklyn, N. Y.*

Warrant issued October 10, 1887; answered to October seventeenth; held to bail for trial at Special Sessions on November fifteenth. Adjourned to November thirtieth, and pleaded guilty. Fine twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, T. R. Gray and R. W. Moore, chemist

BOTTLE No. 443.

THE PEOPLE *v.* SANDSTROM.*Justice Walsh's Police Court, Brooklyn, N. Y.*

Warrant issued November 18, 1887; answered to November twenty-first; held to bail for trial at Special Sessions. Set for trial November twenty-ninth, and tried. Convicted. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: T. R. Gray, J. R. Wheeler, and R. W. Moore, chemist

BOTTLE No. 481.

THE PEOPLE *v.* HULTZ.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued November 18, 1887; answered to November twenty-first; adjourned to November twenty-ninth; adjourned indefinitely.

Witnesses: T. R. Gray, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 525.

THE PEOPLE *v.* MARTIN.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued November 30, 1887; answered to December second, and pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 527.

THE PEOPLE *v.* FOY.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-fifth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. C. DuBois and R. W. Moore, chemist.

BOTTLE No. 551.

• THE PEOPLE *v.* HUFF.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-fifth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 501.

THE PEOPLE v. WREDE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-third, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 505.

THE PEOPLE v. WHITE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to December first, and tried. Convicted. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 503.

THE PEOPLE v. BERGE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-third, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 507.

THE PEOPLE v. VON KROGE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to November twenty-third. Pled guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 471.

THE PEOPLE v. McMAHON.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued November 22, 1887; answered to December first, and pleaded guilty. Fined twenty-five dollars.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 475.

THE PEOPLE v. ROHRS.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 29, 1887; answered to December first, and pleaded guilty. Fined twenty-five dollars.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 581.

THE PEOPLE v. WICHEEN.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 25, 1887; answered to November twenty-eighth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 555.

THE PEOPLE v. O'NEIL.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued November 25, 1887; answered to November twenty-eighth; adjourned to December first and tried. Convicted. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 559.

THE PEOPLE *v.* UHTE.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued November 29, 1887; answered to December first. Pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist

BOTTLE No. 173.

THE PEOPLE *v.* GIESELER.*Justice Kenna's Police Court, Brooklyn, N. Y.*

Warrant issued November 29, 1887; answered to November thirtieth; adjourned to December seventh. Pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, Arch. D. Clark and R. W. Moore, chemist.

BOTTLE No. 431.

THE PEOPLE *v.* MELBROOK.*Jefferson Market Police Court, New York.*

Warrant issued November 30, 1887; answered to December first; held to bail for trial at Special Sessions. Called for trial December eighth; adjourned to December nineteenth. Pleaded guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist

BOTTLE No. 509.

THE PEOPLE *v.* SCHMIDT.*Justice Naehér's Police Court, Brooklyn, N. Y.*

Warrant issued December 2, 1887; answered to December third, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 459.

THE PEOPLE *v.* BREMER.

Justice Naehér's Police Court, Brooklyn, N. Y.

Warrant issued December 2, 1887; answered to December third; adjourned to December twelfth, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 133.

THE PEOPLE *v.* MEYER.

Justice Naehér's Police Court, Brooklyn, N. Y.

Warrant issued December 16, 1887; answered to December nineteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 153.

THE PEOPLE *v.* CAMMANN.

Justice Naehér's Police Court, Brooklyn, N. Y.

Warrant issued December 16, 1887; answered to December nineteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: J. J. Sorogan, W. W. Meeteer and E. Waller, chemist.

BOTTLE No. 433.

THE PEOPLE *v.* WOEST.

Jefferson Market Police Court, New York.

Warrant issued December 13, 1887; answered to December fourteenth; held to bail for trial at Special Sessions. Called for trial December nineteenth; adjourned to twenty-first, and pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 565.

THE PEOPLE *v.* COOK.*Justice Naeher's Police Court, Brooklyn, N. Y.*

Warrant issued January 11, 1888; answered to January thirteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses : E. S. Wilson, T. R. Gray and E. W. Martin, chemist

BOTTLE No. 567.

THE PEOPLE *v.* NILSON.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued January 6, 1888; answered to January ninth, and pleaded guilty. Fined twenty-five dollars.

Witnesses : E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 563.

THE PEOPLE *v.* KOOPMAN.*Justice Naeher's Police Court, Brooklyn, N. Y.*

Warrant issued January 11, 1888; answered to January thirteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses : E. S. Wilson, T. R. Gray and E. W. Martin, chemist

BOTTLE No. 589.

THE PEOPLE *v.* PRIGGE.*Justice Naeher's Police Court, Brooklyn, N. Y.*

Warrant issued January 20, 1888; answered to January twenty-third, and pleaded guilty. Fined twenty-five dollars.

Witnesses : T. R. Gray, E. S. Wilson and E. W. Martin, chemist

BOTTLE No. 585.

THE PEOPLE *v.* BRAHNEY.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued January 24, 1888; answered to January twenty-sixth; held to bail for trial at Special Sessions on January

thirtieth ; adjourned to February sixth. Called for trial February sixth, and tried. Convicted. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses : T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 593.

THE PEOPLE *v.* FEINBERG.

Essex Market Police Court, N. Y.

Warrant issued February 17, 1888 ; answered to February eighteenth ; held to bail for trial at Special Sessions. Called for trial February twenty-third ; adjourned to March first ; to March second. Tried and acquitted.

Counsel, Chas. D. Olendorf.

Witnesses : T. R. Gray, J. R. Wheler and R. W. Moore, chemist.

BOTTLE No. 605.

THE PEOPLE *v.* BOYCE.

Justice Hyatt's Police Court, White Plains, N. Y.

Warrant issued February 20, 1888 ; answered to February twenty-ninth ; held to bail for trial at Special Sessions. Called for trial March sixth ; adjourned to March seventeenth, to thirty-first, and tried. Convicted. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses : T. R. Gray, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 816.

THE PEOPLE *v.* REYNOLDS.

Harlem Police Court, New York.

Warrant issued March 7, 1888 ; answered to March eighth ; held to bail for trial at Special Sessions. Set for trial March nineteenth ; adjourned to April second. Called for trial, and tried. Convicted. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses : Arch. D. Clark, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 570.

THE PEOPLE *v.* HOPPE.*Tombs Police Court, New York.*

Warrant issued March 6, 1888; answered to March seventh; held to bail for trial at Special Sessions. Set for trial March twelfth; adjourned to March fifteenth, and tried. Convicted. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, Arch. D. Clark and R. W. Moore, chemist.

BOTTLE No. 577.

THE PEOPLE *v.* MOHRBECK.*Tombs Police Court, New York.*

Warrant issued March 6, 1888; answered to March seventh; held to bail for trial at Special Sessions. Set for trial March twelfth; adjourned to March fifteenth, and pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, Arch. D. Clark and R. W. Moore, chemist.

BOTTLE No. 575.

THE PEOPLE *v.* RABE.*Jefferson Market Police Court, New York.*

Warrant issued March 8, 1888; answered to March ninth; held to bail for trial at Special Sessions. Called for trial March sixteenth, and pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, Arch. D. Clark and R. W. Moore, chemist.

BOTTLE No. 603.

THE PEOPLE *v.* HARRIS.*Essex Market Police Court, New York.*

Warrant issued March 7, 1888; answered to March eighth; held to bail for trial at General Sessions; before grand jury May 21,

1888. Indicted. Called for trial May twenty-fourth, and case transferred to Special Sessions; called for trial May thirty-first, and pleaded guilty. Fined twenty-five dollars.

Counsel, L. S. Gove.

Witnesses: T. R. Gray, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 609.

THE PEOPLE v. KORMAN.

Essex Market Police Court, New York.

Warrant issued March 7, 1888; answered to March ninth, and held to bail for trial at Special Sessions. Called for trial March sixteenth, and tried. Convicted. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 613.

THE PEOPLE v. SULLIVAN.

Essex Market Police Court, New York.

Warrant issued March 9, 1888; answered to March tenth; held to bail for trial at Special Sessions. Called for trial March nineteenth. Pled Guilty. Fined \$150.

Counsel, Chas. D. Olendorf.

Witnesses: E. S. Wilson, W. W. Meeteer and E. G. Love, chemist.

BOTTLE No. 623.

THE PEOPLE v. FRIEDLANDER.

Essex Market Police Court. New York.

Warrant issued March 16, 1888; answered March nineteenth; held to bail for trial at Special Sessions. Called for trial March twenty-seventh; tried. Convicted. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 801.

THE PEOPLE v. FINKERNAGEL.

Essex Market Police Court, New York.

Warrant issued March 16, 1888; answered to March twentieth, and held to bail for trial at Special Sessions. Called for trial March twenty-seventh. Pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 803.

THE PEOPLE v. O'CONNOR.

Essex Market Police Court, New York.

Warrant issued March 16, 1888; answered to March nineteenth; adjourned to March twenty-sixth, and held to bail for trial at General Sessions; case transferred to Special Sessions. Called for trial May twenty-eighth. Pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 136.

THE PEOPLE v. WULBURN.

Tombs Police Court, New York.

Warrant issued March 16, 1888; answered to March twentieth; held to bail for trial at Special Sessions. Called for trial April second. Pleaded guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 601.

THE PEOPLE v. SACKMANN.

Jefferson Market Police Court, New York.

Warrant issued March 19, 1888; answered to March twentieth; held to bail for trial at General Sessions; before grand jury May twenty-first. Indicted. Up for pleading May twenty-second. Pled guilty. Sentence suspended.

Counsel, L. S. Gove.

Witnesses: T. R. Gray, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 827.

THE PEOPLE v. SARRO.

Tombs Police Court, New York.

Warrant issued March 27, 1888; answered to March twenty-eighth; held to bail for trial at Special Sessions. Called for trial April second. Pled guilty. Sentence suspended.

Counsel, F. V. S. Oliver.

Witnesses: J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 817.

THE PEOPLE v. GARDELLA.

Tombs Police Court, New York.

Warrant issued March 27th, 1888; answered to March twenty-eighth; held to bail for trial at General Sessions; case transferred to Special Sessions on May twenty-first. Called for trial May twenty-eighth. Pled guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: A. D. Clark, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 599.

THE PEOPLE *v.* MASTERSON.*Justice Walsh's Police Court, Brooklyn, N. Y.*

Warrant issued April 2, 1888; answered to April seventeenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist

BOTTLE No. 597.

THE PEOPLE *v.* CLARK.*Justice Walsh's Police Court, Brooklyn, N. Y.*

Warrant issued April 2, 1888; answered to April seventeenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist

BOTTLE No. 807.

THE PEOPLE *v.* GRUNE.*Essex Market Police Court, New York.*

Warrant issued April 4, 1888; answered to April fourth; held to bail for trial at Special Sessions. Set for trial April ninth; adjourned to April sixteenth, and pleaded guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. R. Wheeler, T. R. Gray and R. W. Moore, chemist

BOTTLE No. 617.

THE PEOPLE *v.* PINCKNEY.*Justice Walsh's Police Court, Brooklyn, N. Y.*

Warrant issued April 14, 1888; answered to April sixteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist

BOTTLE No. 615.

THE PEOPLE *v.* CARY.

Justice Walsh's Police Court, Brooklyn, N. Y.

Warrant issued April 14, 1888 ; answered to April eighteenth, and pleaded guilty. Fined forty dollars.

Witnesses : E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 819.

THE PEOPLE *v.* SEEBECK.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 5, 1888 ; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses : J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 823.

THE PEOPLE *v.* STRAUSS.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 5, 1888 ; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses : J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 821.

THE PEOPLE *v.* VON KROGE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 5, 1888 ; answered to April seventh, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses : J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 825.

THE PEOPLE *v.* BISCHOFF.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 5, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 889.

THE PEOPLE *v.* DOPPMAN.*Justice Massey's Court, Brooklyn, N. Y.*

Warrant issued April 6, 1888; answered to April seventh, and pleaded guilty. Fined fifty dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 887.

THE PEOPLE *v.* LAUBENBERGER.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 5, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 885.

THE PEOPLE *v.* STEILEN.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 5, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 883.

THE PEOPLE *v.* FISCHWINGER.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 5, 1888; answered to April seventh.
Pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 937.

THE PEOPLE *v.* STEIGER.

Jefferson Market Police Court, New York.

Warrant issued April 5, 1888; answered to April tenth; held to bail for trial at General Sessions; before grand jury May twenty-first. Indicted. Set for trial May twenty-fourth, and case transferred to Special Sessions. Called for trial May thirty-first, and tried. Convicted. Fined twenty-five dollars.

Counsel, L. S. Gove.

Witnesses: J. J. Sorogan, E. S. Wilson and J. F. Geisler, chemist.

BOTTLE No. 911.

THE PEOPLE *v.* LECKHORN.

Jefferson Market Police Court, New York.

Warrant issued April 5, 1888; answered to April tenth; held to bail for trial at Special Sessions. Called for trial April sixteenth. Pleaded guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, E. S. Wilson and J. F. Geisler, chemist.

BOTTLE No. 919.

THE PEOPLE *v.* STICHT.

Justice Kenna's Police Court, Brooklyn, N. Y.

Warrant issued April 9, 1888; answered to April eleventh.
Pleaded guilty. Fined twenty-five dollars.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 917.

THE PEOPLE *v.* KNEBEL.*Justice Kenna's Police Court, Brooklyn, N. Y.*

Warrant issued April 9, 1888; answered to April eleventh, and pleaded guilty. Fined twenty-five dollars.

Witnesses: J. J. Sorogan, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 829.

THE PEOPLE *v.* JENTZEN.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 6, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: Arch. D. Clark, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 831.

THE PEOPLE *v.* DOHRMAN.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 6, 1888; answered to April seventh; held to bail for trial at Special Sessions. Called for trial April sixteenth. Pled guilty. Fined thirty dollars.

Counsel, A. C. Salmon.

Witnesses: Arch. D. Clark, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 833.

THE PEOPLE *v.* WOBIG.*Justice Massey's Police Court, Brooklyn, N. Y.*

Warrant issued April 6, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: A. D. Clark, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 835.

THE PEOPLE v. PREITZ.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 6, 1888; answered to April seventh, and pleaded guilty. Fined twenty-five dollars.

Counsel, A. C. Salmon.

Witnesses: A. D. Clark, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 837.

THE PEOPLE v. MEINKE.

Harlem Police Court, New York.

Warrant issued April 11, 1888; answered to April twelfth; held to bail for trial at Special Sessions. Called for trial April eighteenth. Tried, convicted and fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: A. D. Clark, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 839.

THE PEOPLE STEMMERMANN.

Harlem Police Court, New York.

Warrant issued April 11, 1888; answered to April twelfth; held to bail for trial at Special Sessions. Called for trial April eighteenth. Tried. Convicted. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: A. D. Clark, W. W. Meeteer and R. W. Moore, chemist.

BOTTLE No. 929.

THE PEOPLE v. ROKOS.

Yorkville Police Court, New York.

Warrant issued April 12, 1888; answered to April thirteenth; held to bail for trial at Special Sessions. Called for trial April eighteenth. Pled guilty. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses: A. D. Clark, W. W. Meeteer and J. F. Geisler, chemist.

BOTTLE No. 903.

THE PEOPLE v. PFLEGER.

Harlem Police Court, New York.

Warrant issued April 11, 1888 ; answered to April twelfth ; held to bail for trial at Special Sessions. Set for trial April eighteenth, and tried. Convicted. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses : W. W. Meeteer, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 901.

THE PEOPLE v. GARDNER.

Harlem Police Court, New York.

Warrant issued April 11, 1888 ; answered to April twelfth ; held to bail for trial at Special Sessions. Set for trial April eighteenth ; adjourned to May second ; to May third, and pleaded guilty. Fined fifty dollars.

Counsel, Chas. D. Olendorf.

Witnesses : W. W. Meeteer, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 847.

THE PEOPLE v. GERKEN.

Justice Kenna's Police Court, Brooklyn, N. Y.

Warrant issued April 10, 1888 ; answered to April eleventh, and pleaded guilty. Fined twenty-five dollars.

Witnesses : W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 849.

THE PEOPLE v. SCHONAN.

Justice Kenna's Police Court, Brooklyn, N. Y.

Warrant issued April 10, 1888 ; answered to April eleventh, and pleaded guilty. Fined fifty dollars.

Witnesses : W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 841.

THE PEOPLE v. BURNS.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 12, 1888; answered to April thirteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 843.

THE PEOPLE v. JOHNSON.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 12, 1888; answered to April thirteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 845.

THE PEOPLE v. REILLY.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued April 12, 1888; answered to April thirteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses: W. W. Meeteer, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 905.

THE PEOPLE v. MOORE.

Tombs Police Court, New York.

Warrant issued April 12, 1888; answered to April fourteenth; held to bail for trial at General Sessions; before grand jury May twenty-first. Indicted. Case transferred to Special Sessions on May twenty-fourth; set for trial May thirty-first; adjourned to June fifth, and tried. Convicted. Fined fifty dollars.

Counsel, L. S. Gove.

Witnesses: W. W. Meeteer, A. D. Clark and J. F. Geisler, chemist.

BOTTLE No. 891.

THE PEOPLE *v.* WISAUSKY.*Essex Market Police Court, New York.*

Warrant issued April 16, 1888; answered to April seventeenth; held to bail for trial at Special Sessions. Set for trial April twenty-third, and tried. Convicted. Fined twenty-five dollars. Counsel F. V. S. Oliver.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 895.

THE PEOPLE *v.* KISSLING.*Jefferson Market, Police Court New York.*

Warrant issued April 19, 1888; answered to April twentieth; held to bail for trial at Special Sessions. Called for trial May second. Pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: E. S. Wilson, J. J. Sorogan and J. F. Geisler, chemist.

BOTTLE No. 871.

THE PEOPLE *v.* WASSESTRON.*Essex Market Police Court, New York.*

Warrant issued April 14, 1888; answered to April sixteenth; held to bail for trial at Special Sessions. Called for trial April twenty-third. Pleaded guilty. Fined twenty-five dollars.

Counsel F. V. S. Oliver.

Witnesses: T. R. Gray, E. S. Wilson and R. W. Moore, chemist.

BOTTLE No. 909.

THE PEOPLE *v.* MCGEE.*Harlem Police Court, New York.*

Warrant issued April 26, 1888; answered to May seventh; held to bail for trial at Special Session. Called for trial May fourteenth. Tried. Convicted. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses: W. W. Meeteer, A. D. Clark and R. W. Moore, chemist.

BOTTLE No. 1,020.

THE PEOPLE *v.* MEYER.

Jefferson Market Police Court, New York.

Warrant issued April 25, 1888 ; answered to April twenty-sixth ; held to bail for trial at Special Sessions. Called for trial May second ; adjourned to May ninth, and pleaded guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses : J. J. Sorogan, J. R. Wheeler and J. F. Geisler, chemist.

BOTTLE No. 1,019.

THE PEOPLE *v.* KLINGLER.

Jefferson Market Police Court, New York.

Warrant issued April 25, 1888 ; answered to April twenty-sixth ; held to bail for trial at Special Sessions. Called for trial May second ; adjourned to May ninth. Pled guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses : J. J. Sorogan, J. R. Wheeler and J. F. Geisler, chemist.

BOTTLE No. 1,011.

THE PEOPLE *v.* FROLICH.

Harlem Police Court, New York.

Warrant issued April 26, 1888 ; answered to April thirtieth ; held to bail for trial at Special Sessions. Called for trial May seventh ; tried. Convicted. Fined fifty dollars.

Counsel, Charles D. Olendorf.

Witnesses : J. J. Sorogan, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 867.

THE PEOPLE *v.* GABEL.

Justice Kenna's Police Court, New York.

Warrant issued April 27, 1888 ; answered to April thirtieth ; held to bail for trial at Special Sessions. Set for trial May

second; adjourned to May twenty-fifth, to June twenty-fifth, to July twenty-third, and to October twenty-third.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, W. W. Meeteer and J. F. Geisler, chemist.

BOTTLE No. 869.

THE PEOPLE *v.* CRANE.

Justice Kenna's Police Court, Brooklyn, N. Y.

Warrant issued April 27, 1888; answered to April thirtieth; held to bail for trial at Special Sessions. Set for trial May third; adjourned to May twenty-fifth; to June twenty-fifth; to July twenty-third, and to October twenty-third.

Counsel, A. C. Salmon.

Witnesses: J. J. Sorogan, W. W. Meeteer and J. F. Geisler, chemist.

BOTTLE No. 939.

THE PEOPLE *v.* SCHUTE.

Jefferson Market Police Court, New York.

Warrant issued April 26, 1888; answered to May third; held to bail for trial at Special Sessions. Called for trial May ninth; tried. Convicted. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 941.

THE PEOPLE *v.* HEIL.

Jefferson Market Police Court, New York.

Warrant issued April 26, 1888; answered to May second; held to bail for trial at Special Sessions. Called for trial May ninth; tried. Convicted. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses: J. J. Sorogan, J. R. Wheeler and R. W. Moore, chemist.

BOTTLE No. 947.

THE PEOPLE *v.* KEENAN.

Jefferson Market Police Court, New York.

Warrant issued April 27, 1888 ; answered to May second ; held to bail for trial at Special Sessions. Called for trial May ninth ; tried. Convicted. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses : J. R. Wheeler, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 945.

THE PEOPLE *v.* QUERU.

Jefferson Market Police Court, New York.

Warrant issued April 27, 1888 ; answered to May second ; and held to bail for trial at Special Sessions. Called for trial May fourth. Pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses : J. R. Wheeler, J. J. Sorogan and J. F. Geisler, chemist.

BOTTLE No. 1010.

THE PEOPLE *v.* TIEMEYER.

Jefferson Market Police Court, New York.

Warrant issued April 27, 1888 ; answered to May second ; held to bail for trial at Special Sessions. Called for trial May fourth, and pleaded guilty. Fined twenty-five dollars.

Counsel, Chas. D. Olendorf.

Witnesses : J. R. Wheeler, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 897.

THE PEOPLE *v.* McCABE.

Justice Massey's Police Court, Brooklyn, N. Y.

Warrant issued May 12, 1888 ; answered to May fourteenth, and pleaded guilty. Fined twenty-five dollars.

Witnesses : E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

BOTTLE No. 1001.

THE PEOPLE *v.* MARSCHAL.*Justice Kenna's Police Court, Brooklyn, N. Y.*

Warrant issued May 3, 1888 ; answered to May fourth, and pleaded guilty. Fined twenty-five dollars.

Witnesses : J. R. Wheeler, W. W. Meeteer and J. F. Geisler, chemist.

BOTTLE No. 1012.

THE PEOPLE *v.* GRANGER.*Jefferson Market Police Court, New York.*

Warrant issued May fourteenth ; answered to May seventeenth ; adjourned to May eighteenth for examination ; held to bail for trial at Special Sessions. Set for trial May twenty-fourth ; adjourned to twenty-eighth, to June fourth and tried. Convicted. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses : J. J. Sorogan, J. R. Wheeler and R. W. Moore, chemist

BOTTLE No. 935.

THE PEOPLE *v.* ABRAMS.*Harlem Police Court, New York.*

Warrant issued May 28, 1888 ; answered to May twenty-fourth ; held to bail for trial at Special Sessions. Called for trial May thirty-first. Pled guilty. Fined twenty-five dollars.

Counsel, Charles D. Olendorf.

Witnesses : A. D. Clark, W. W. Meeteer and R. W. Moore, chemist

BOTTLE No. 1002.

THE PEOPLE *v.* McDONALD.*Harlem Police Court, New York.*

Warrant issued May 28, 1888 ; answered to May twenty-ninth ; held to bail for trial at General Sessions.

Witnesses : J. R. Wheeler, J. J. Sorogan and R. W. Moore, chemist.

BOTTLE No. 899.

THE PEOPLE v. TUTHILL.

Justice Naehar's Police Court, Brooklyn, N. Y.

Warrant issued June 9, 1888; answered to June eleventh; held to bail for trial at Special Sessions. Called for trial June twenty-seventh; adjourned to July eleventh; to nineteenth; to October nineteenth.

Counsel, A. C. Salmon.

Witnesses: E. S. Wilson, T. R. Gray and R. W. Moore, chemist.

The result of the 114 preceding prosecutions for violations of the milk law, commenced between October 1, 1887, and September 30, 1888, were as follows:

Convicted at Special Sessions.....	102
Awaiting trial at Special Sessions.....	5
Acquitted at Special Sessions.....	2
Convicted at Special Sessions, sentence suspended.....	1
Dismissed at Special Sessions.....	1
Complaint withdrawn.....	1
Convicted at General Sessions, sentence suspended.....	1
Awaiting trial at General Sessions.....	1
Total.....	114

Total fines imposed, \$3,045.

The final result of prosecutions under the laws relating to oleomargarine and adulterated milk for the year ending September 30, 1888, was as follows:

Oleomargarine cases remaining untried September 30, 1887.....	12
Milk cases remaining untried September 30, 1887.....	29
Total cases remaining untried September, 30, 1887...	41

Oleomargarine cases prosecuted during the year ending September 30, 1888	110
Milk cases prosecuted during year ending September 30, 1888	114
	<hr/>
Total number of cases	265
	<hr/>
Convicted	226
Acquitted	8
Dismissed from calendar	2
Dismissed on examination in police court	4
Bail forfeited	1
Complaints withdrawn (reason given in report)	7
Remaining on calendar awaiting trial	23
	<hr/>
	265
	<hr/>

Total fines imposed during year, \$8,620.

During the month of July the milk arriving over the different railroads for consumption in New York and Brooklyn was inspected after having been delivered to the peddlers.

The system adopted was to obtain from the police department several policemen, and then, through the assistance of these patrolmen, the wagons were formed in line as they come off the ferry-boats, then to inspect the milk found on each wagon before allowing it to leave the line.

The milk arriving over the L. E. and W. R. R. that came into the city of New York by way of the Chambers and Twenty-third street ferries, comprising 2,074 cans, was inspected on the night of July tenth. The milk arriving over the West Shore and O. and W. R. R. by way of Jay and Forty-second street ferries, comprising 2,624 cans, was inspected on the night of July eleventh. The milk arriving over the New York and Northern railroad and delivered at High Bridge station, comprising 1297 cans, was inspected on the night of July seventeenth.

The milk arriving over the Harlem railroad and delivered at Forty-seventh street, comprising 1,946 cans, was inspected on the night of July eighteenth.

The total amount of milk inspected at the different depots named was 7,941 cans, representing 1,857 different dairies, 7,874

cans were found by the lactometer test to be standard, and only sixty-seven cans were shown by the lactometer test, at a temperature of sixty degrees, to be below the lowest standard in quality allowed, under the dairy law, and were called doubtful. The result of the above inspections showed that the milk when it arrived in New York was of just about the same standard as the producers milk was shown to be by inspections made at different dates, during the summer, when delivered by them at the railroad stations for shipment to New York.

The per cent of cans of milk that, by the test applied, were shown to be of such quality as to cause the purity of the milk to be doubtful, was in each case very nearly seven eighths of one per cent of the whole quantity inspected during the year, and proves that there is but a very small percentage of the milk shipped to this market, by the producers, that is not up to the standard required; also, the inspections of milk found in the hands of peddlers when on their routes, showed a slight percentage of adulteration, and that found in the retail stores showing an average of four per cent of samples tested to be adulterated, is pretty conclusive proof that at least three fourths of the adulterated milk sold in New York and Brooklyn during the past year was adulterated after it left the hands of the producers.

There has always been a great deal of unfairness in the claim by the milk dealers in the cities that the producers were adulterating their milk; while it is no doubt a fact that a few producers do the great mass do not adulterate.

There has been more or less pleuro-pneumonia among the cows in Westchester and Queens counties during the year past, but, as stated in my former report, it is very difficult to trace the milk from the farm into the market, for the reason that as soon as the cows in a diseased herd are milked the milk is taken into the private residence of the farmer, thereby the expert loses sight of it, and, when a few hours later the farmer ships from his house a quantity of milk, it is impossible to prove that such milk is that drawn from the diseased cows or from that portion of the herd that did not yet show disease.

For the reasons above stated no prosecutions for selling diseased milk has been brought, and in justice to the producers will

say, that according to the best information that we have been able to obtain on the subject, I feel warranted in stating that as a rule the producers have not shipped the milk from diseased cows to market, except in a few cases the experts were led to believe that such milk was shipped to market, although they have not succeeded in obtaining sufficient evidence to warrant prosecution.

Notwithstanding the difficulties in the premises above noted, I have kept one or more of the State experts continually looking after diseased cows, to so far as possible prevent any milk drawn from them being shipped to market.

This has had a wholesome effect, and no doubt prevented much of the diseased milk reaching the market, that otherwise would have been marketed and used as an article of food.

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM.

	WEEK ENDING OCT. 7.			WEEK ENDING OCT. 14.			WEEK ENDING OCT. 21.			WEEK ENDING OCT. 28.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	3,556	65	30	3,790	70	32	3,005	58	32	3,545	59	32
New York Central and Hudson River.....	2,255	4	47	2,305	4	70	2,361	4	60	2,328	4	65
New York, Susquehanna and Western	1,350	27	.....	1,362	47	.....	1,346	29	.....	1,350	24	.....
New York, Ontario and Western	1,432	70	.....	1,500	64	.....	1,463	45	.....	1,420	50	.....
New York City and Northern	1,275	.....	.....	1,263	.....	.....	1,272	.....	.....	1,228	.....	.....
New York, New Haven and Hartford	1,192	.....	.....	1,207	.....	.....	1,215	.....	.....	1,181	.....	.....
West Shore.....	768	15	99	790	15	95	780	10	96	751	8	91
New Jersey Central.....	513	12	.....	513	12	.....	513	12	.....	513	12	.....
Long Island.....	390	.....	.....	419	.....	.....	405	.....	.....	406	.....	.....
Miscellaneous	1,326	.....	.....	1,326	.....	.....	1,326	.....	.....	1,326	.....	.....
Total.....	14,047	193	176	14,475	212	197	13,696	158	188	14,048	157	188

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM—(Continued).

	WEEK ENDING NOV. 4.			WEEK ENDING NOV. 11.			WEEK ENDING NOV. 18.			WEEK ENDING NOV. 25.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,573	63	32	3,493	70	32	3,426	63	32	3,414	83	29
New York Central and Hudson River.....	2,450	4	63	2,434	4	37	2,405	5	82	2,437	5	70
New York, Susquehanna and Western	1,361	46	.....	1,453	50	.....	1,428	51	.....	1,480	55	.....
New York, Ontario and Western	1,361	32	.....	1,322	23	.....	1,333	24	.....	1,340	33	.....
New York City and Northern	1,223	.....	.....	1,311	.....	.....	1,203	.....	.....	1,146	.....	.....
New York, New Haven and Hartford	1,116	.....	.....	1,116	.....	.....	1,116	.....	.....	1,100	.....	.....
West Shore.....	700	8	92	653	10	96	594	9	86	580	9	90
New Jersey Central.....	517	12	.....	517	12	.....	517	12	.....	517	12	.....
Long Island.....	422	.....	.....	422	.....	.....	415	.....	.....	414	.....	.....
Miscellaneous	2,024	15	.....	2,024	15	.....	2,024	15	.....	2,024	15	.....
Total	14,752	180	187	14,754	184	165	14,461	179	200	14,452	212	180

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING DEC. 2.			WEEK ENDING DEC. 9.			WEEK ENDING DEC. 16.			WEEK ENDING DEC. 23.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,372	79	30	3,441	76	30	3,445	73	31	3,390	79	31
New York Central and Hudson River.....	2,450	5	80	2,503	5	76	2,550	5	64	2,557	5	92
New York, Susquehanna and Western	1,440	53	.....	1,440	48	.....	1,433	48	.....	1,360	38	.....
New York, Ontario and Western	1,317	17	.....	1,297	17	.....	1,338	17	.....	1,342	17	.....
New York City and Northern	1,127	.....	.....	1,142	.....	.....	1,145	.....	.....	1,152	.....	.....
New York, New Haven and Hartford	1,100	.....	.....	1,039	.....	.....	1,050	.....	.....	1,043	.....	.....
West Shore.....	592	8	23	575	5	25	600	6	27	603	7	27
New Jersey Central.....	517	12	.....	517	10	.....	517	.....	10	517	10	.....
Long Island.....	419	.....	.....	423	.....	.....	430	.....	.....	420	.....	.....
Miscellaneous	1,940	.....	.....	1,940	.....	.....	1,940	.....	.....	1,940	.....	.....
Total	14,274	179	203	14,317	161	701	14,448	149	202	14,224	153	220

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING DEC. 30.			WEEK ENDING JAN. 6.			WEEK ENDING JAN. 13.			WEEK ENDING JAN. 20.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,330	80	32	3,406	82	31	3,363	84	32	3,467	80	32
New York Central and Hudson River	2,593	5	76	2,780	7	61	2,780	11	70	2,821	10	43
New York, Susquehanna and Western	1,284	43	.....	1,285	14	.....	1,277	18	.....	1,286	20	.....
New York, Ontario and Western	1,337	17	.....	1,242	27	.....	1,242	27	.....	1,242	27	.....
New York City and Northern	1,121	.....	.....	1,172	.....	.....	1,234	.....	.....	1,263	.....	.....
New York, New Haven and Hartford	1,055	.....	.....	1,013	.....	.....	1,013	.....	.....	1,013	.....	.....
West Shore Railroad	612	6	99	764	6	104	764	6	104	764	6	104
New Jersey Central	517	10	.....	506	9	.....	506	9	.....	506	9	.....
Long Island.	420	.....	.....	209	.....	.....	209	.....	.....	206	.....	.....
Miscellaneous	1,940	.....	.....	1,410	.....	.....	1,410	.....	.....	1,410	.....	.....
Total.....	14,209	161	207	13,787	145	196	13,798	155	206	13,967	152	179

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING JAN. 27.			WEEK ENDING FEB. 3.			WEEK ENDING FEB. 10.			WEEK ENDING FEB. 17.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,120	80	33	3,816	109	32	3,434	90	33	3,526	96	33
New York Central and Hudson River	2,750	9	80	2,822	8	88	2,823	10	63	2,782	10	63
New York, Ontario and Western	1,242	27	.....	1,272	30	.....	1,250	39	.....	1,280	29	.....
New York, Susquehanna and Western	1,128	21	.....	1,463	20	.....	1,282	20	.....	1,332	27	.....
New York City and Northern	1,295	.....	.....	1,333	.....	.....	1,338	.....	.....	1,341	.....	.....
New York, New Haven and Hartford	1,013	.....	.....	1,013	.....	.....	1,010	.....	.....	1,010	.....	.....
West Shore.....	764	6	104	766	5	104	740	7	118	761	10	112
New Jersey Central.....	506	9	.....	506	9	.....	524	8	.....	524	8	.....
Long Island.....	198	.....	.....	203	.....	.....	205	.....	.....	205	.....	.....
Miscellaneous.....	1,410	.....	.....	1,460	.....	.....	1,460	.....	.....	1,460	.....	.....
Total.....	13,426	152	217	14,651	181	224	14,086	174	214	14,221	179	213

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM—(Continued).

	WEEK ENDING FEB. 24.			WEEK ENDING MAR. 2.			WEEK ENDING MAR. 9.			WEEK ENDING MAR. 16.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	3,565	94	36	3,500	95	35	3,682	91	33	2,395	71	36
New York Central and Hudson River.....	2,822	9	64	2,812	11	66	2,800	11	71	1,820	6	60
New York, Ontario and Western	1,342	30	.....	1,407	44	.....	1,470	46	.....	668	19	.....
New York, Susquehanna and Western	1,370	28	.....	1,406	23	.....	1,429	28	.....	742	19	.....
New York City and Northern	1,352	.....	.....	1,354	.....	.....	1,365	.....	.....	571	.....	.....
New York, New Haven and Hartford	1,010	.....	.....	1,010	.....	.....	574	.....	.....	574	.....	.....
West Shore.....	805	9	114	841	8	114	855	8	113	482	7	73
New Jersey Central.....	524	8	.....	524	8	.....	490	7	.....	490	7	.....
Long Island.....	204	.....	.....	201	.....	.....	201	.....	.....	93	.....	.....
Miscellaneous	1,460	.....	.....	1,323	.....	.....	1,323	.....	.....	1,323	.....	.....
Total.....	14,454	168	214	14,378	189	215	14,180	191	217	9,158	129	169

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM—(Continued).

	WEEK ENDING MAR. 28.			WEEK ENDING MAR. 30.			WEEK ENDING APRIL 6.			WEEK ENDING APRIL 13.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	3,640	94	32	3,458	94	38	3,550	107	38	3,550	100	44
New York Central and Hudson River.....	3,000	16	3	2,744	11	60	2,702	10	67	2,621	10	68
New York, Ontario and Western	1,600	60	.....	1,418	43	.....	1,465	79	.....	1,408	82	.....
New York, Susquehanna and Western	1,400	24	.....	1,390	24	.....	1,425	29	.....	1,453	33	.....
New York City and Northern	1,443	.....	.....	1,257	.....	.....	1,190	.....	.....	1,170	.....	.....
New York, New Haven and Hartford	574	.....	.....	574	.....	.....	926	.....	.....	926	.....	.....
West Shore.....	982	13	116	897	14	108	948	17	96	995	16	92
New Jersey Central.....	490	7	.....	490	7	.....	499	8	.....	499	8	.....
Long Island.....	201	.....	.....	198	.....	.....	187	.....	.....	200	.....	.....
Miscellaneous	1,323	.....	.....	1,323	.....	.....	1,833	33	.....	1,833	33	.....
Total	14,653	214	151	13,749	193	196	14,665	283	201	14,596	282	204

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING APRIL 20.			WEEK ENDING APRIL 27.			WEEK ENDING MAY 4.			WEEK ENDING MAY 11.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,580	85	44	3,434	100	37	3,277	118	32	3,805	123	42
New York Central and Hudson River.....	2,585	5	61	2,585	6	68	2,230	5	50	2,695	6	68
New York, Ontario and Western	1,376	83	.....	1,392	83	.....	1,333	134	.....	1,551	160	.....
New York, Susquehanna and Western	1,469	37	.....	1,453	34	.....	1,309	59	.....	1,550	66	.....
New York City and Northern	1,035	.....	.....	1,203	.....	.....	1,053	.....	.....	1,261	.....	.....
New York, New Haven and Hartford	926	.....	.....	926	.....	.....	926	.....	.....	1,132	.....	.....
West Shore.....	1,013	16	95	1,023	22	97	912	22	216	1,037	29	366
New Jersey Central.....	439	8	.....	439	8	.....	439	8	.....	478	10	.....
Long Island.....	200	.....	.....	178	.....	.....	170	.....	.....	200	.....	.....
Miscellaneous	1,833	33	.....	1,833	33	.....	2,123	65	.....	2,123	65	.....
Total... ..	14,456	267	200	14,471	266	202	13,777	411	298	15,842	459	476

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING MAY 18.			WEEK ENDING MAY 25.			WEEK ENDING JUNE			WEEK ENDING JUNE 8.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	3,863	135	41	3,830	139	43	3,812	162	50	4,045	193	51
New York Central and Hudson River.....	2,745	7	72	2,760	7	38	2,758	7	38	2,762	7	39
New York, Ontario and Western	1,575	154	.....	1,483	123	.....	1,455	130	.....	1,572	175	.....
New York, Susquehanna and Western	1,572	63	.....	1,603	68	.....	1,582	86	.....	1,647	59	.....
New York and Northern	1,302	.....	.....	1,290	.....	.....	1,295	.....	.....	1,244	.....	.....
New York, New Haven and Hartford	1,132	.....	.....	1,132	.....	.....	1,133	.....	.....	954	.....	.....
West Shore.....	1,115	28	374	1,100	31	368	1,106	36	375	1,130	39	367
New Jersey Central.....	478	10	.....	478	10	.....	478	10	.....	521	18	.....
Long Island.....	201	.....	.....	227	.....	.....	211	.....	.....	242	.....	.....
Miscellaneous	2,123	65	.....	2,123	65	.....	2,123	65	.....	2,940	140	.....
Total.....	16,106	452	437	16,026	443	449	15,952	496	463	17,060	631	457

DAILY AVERAGE RECEIPTS IN NEW YORK PER WEEK OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING JUNE 15.			WEEK ENDING JUNE 22.			WEEK ENDING JUNE 29.			WEEK ENDING JULY 6.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	4,126	167	67	4,470	280	35	4,745	278	44	4,552	210	34
New York Central and Hudson River.....	2,752	7	48	2,696	7	61	2,634	5	131	2,178	6	87
New York, Ontario and Western	1,640	162	.....	1,706	130	.....	2,215	232	.....	1,613	178	.....
New York, Susquehanna and Western	1,576	70	.....	1,584	62	.....	1,750	53	.....	1,490	118	.....
New York Central and Northern	1,278	.....	.....	1,314	.....	.....	1,142	.....	.....	1,134	.....	.....
New York, New Haven and Hartford	954	.....	.....	954	.....	.....	954	.....	.....	970	.....	.....
West Shore.....	1,121	32	375	1,107	28	367	1,157	83	370	1,130	40	100
New Jersey Central.....	521	18	.....	521	18	.....	521	18	.....	576	16	.....
Long Island.....	242	.....	.....	242	.....	.....	242	.....	.....	571	.....	.....
Miscellaneous.....	2,940	140	.....	2,940	140	.....	2,940	140	.....	2,810	76	.....
Total.....	17,150	596	390	17,534	665	463	18,300	760	545	15,824	644	421

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM—(Continued).

	WEEK ENDING JULY 13.			WEEK ENDING JULY 20.			WEEK ENDING JULY 27.			WEEK ENDING AUG. 3.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	4,178	135	45	4,032	151	39	4,006	168	38	4,040	135	36
New York Central and Hudson River.....	2,424	6	48	2,354	6	75	2,202	4	76	2,158	5	110
New York, Ontario and Western	1,613	178	.....	1,686	178	.....	1,613	178	.....	1,613	178	.....
New York, Susquehanna and Western	1,726	58	.....	1,686	80	.....	1,672	86	.....	1,675	70	.....
New York and Northern	1,319	.....	.....	1,276	.....	.....	1,215	.....	.....	1,190	.....	.....
New York, New Haven and Hartford	970	.....	.....	970	.....	.....	970	.....	.....	970	.....	.....
West Shore.....	1,130	40	100	1,130	40	100	1,130	40	100	1,000	40	100
New Jersey Central.....	516	16	.....	516	16	.....	516	16	.....	516	16	.....
Long Island.....	371	.....	.....	371	.....	.....	371	.....	.....	371	.....	.....
Miscellaneous	2,810	76	.....	2,810	76	.....	2,810	76	.....	2,810	76	.....
Total.....	17,056	509	193	16,758	547	214	16,505	569	214	16,343	520	245

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM—(Continued).

	WEEK ENDING AUG. 10.			WEEK ENDING AUG. 17.			WEEK ENDING AUG. 24.			WEEK ENDING AUG. 31.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western.....	4,101	207	34	3,912	161	36	3,986	176	37	3,911	185	36
New York Central and Hudson River.....	2,115	6	116	2,192	6	106	2,366	6	77	2,196	6	72
New York, Ontario and Western	1,833	206	.....	1,883	176	.....	1,875	176	.....	1,687	126	.....
New York, Susquehanna and Western	1,686	98	.....	1,653	78	.....	1,643	53	.....	1,545	102	.....
New York and Northern	1,162	.....	.....	1,154	.....	.....	1,221	.....	.....	1,154	.....	.....
New York, New Haven and Hartford	967	.....	.....	967	.....	.....	967	.....	.....	967	.....	.....
West Shore.....	1,015	42	100	976	26	90	951	32	74	999	28	77
New Jersey Central.....	516	13	.....	500	13	.....	500	13	.....	500	13	.....
Long Island	172	.....	.....	172	.....	.....	172	.....	.....	172	.....	.....
Miscellaneous	2,105	59	.....	2,105	59	.....	2,105	59	.....	2,105	59	.....
Total.....	15,722	630	260	15,514	511	232	16,686	513	188	15,146	468	184

DAILY AVERAGE RECEIPTS IN NEW YORK, PER WEEK, OF CANS OF FORTY QUARTS EACH OF MILK, CONDENSED MILK AND CREAM — (Continued).

	WEEK ENDING SEPT. 7.			WEEK ENDING SEPT. 14.			WEEK ENDING SEPT. 21.			WEEK ENDING SEPT. 30.		
	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.	Milk.	Cream.	Condensed milk.
New York, Lake Erie and Western	3,796	150	38	3,673	103	35	3,704	86	55	3,812	97	32
New York Central and Hudson River.....	2,201	5	53	2,242	4	60	2,253	5	53	2,203	5	77
New York, Ontario and Western	1,631	104	.....	1,578	78	.....	1,576	75	.....	1,693	71	.....
New York, Susquehanna and Western	1,509	44	.....	1,467	20	.....	1,467	23	.....	1,528	29	.....
New York and Northern	1,157	.....	.....	1,158	.....	.....	1,148	.....	.....	1,134	.....	.....
New York, New Haven and Hartford	890	.....	.....	890	.....	.....	890	.....	.....	890	.....	.....
West Shore.....	878	22	55	892	21	85	877	82	75	864	20	70
New Jersey Central.....	467	10	.....	467	10	.....	467	10	.....	467	10	.....
Long Island.....	076	.....	.....	175	...	.....	175	.....	.....	175	.....	.....
Miscellaneous	2,765	47	.....	2,765	47	.....	2,765	47	.....	2,765	47	.....
Total	15,471	382	151	15,307	283	170	15,321	283	163	15,611	279	179

TOTAL RECEIPTS OVER ALL ROADS FOR THE YEAR ENDING OCTOBER
1, 1888.

	Cans milk.	Cans cream.	Cans con- densed milk.	Estimated value, Ft. included.	Average market price to producer.	Platform price.
					Cents.	
October.....	454,259	5,378	5,576	\$750,000	3	\$1 55
November.....	452,399	5,693	5,718	855,000	3½	1 95
December.....	448,102	4,386	6,420	850,000	3½	2 10
January.....	447,620	5,133	6,421	853,000	3½	1 85
February.....	443,447	5,416	6,098	800,000	3½	1 70
March.....	425,249	5,670	6,098	740,000	3	1 75
April.....	463,112	8,742	6,127	805,000	3	1 60
May.....	518,684	14,251	6,617	804,500	2½	1 25
June.....	564,230	22,559	6,455	840,000	2½	1 30
July.....	530,207	17,400	7,416	810,000	2½	1 30
August.....	521,033	15,940	6,737	820,000	2 7-16	1 30
September.....	479,187	8,624	5,521	725,000	2½	1 35
Total.....	5,747,558	119,194	75,183	\$9,652,500	.....	.....

In June last I commenced a systematic investigation of condensed milk by having a couple of each of the different brands of domestic and imported milk analyzed.

The result of these investigations was very satisfactory, so far as domestic milk was concerned, and as to all the brands of imported milk except one, the "Riga." I was informed that the brand that proved impure was put up by a company in Switzerland. The first sample of this brand of milk analyzed proved to be deficient in the amount of fat required by the New York State law. Immediately after learning that the above-named brand of milk was adulterated, I called upon the importer of this brand of milk and informed him that a sample of the Rigi brand of milk sold by him was adulterated by skimming. He seemed to be surprised at the information, but said that the quality of the Riga milk had been questioned by his competitor, and that he had cabled to the manufacturer and exporter of the milk, and read to me what purported to be, and I had no doubt was, their reply. It was in effect that the goods were pure, and that they would forward an analysis made by the best chemist in France to that effect. I then caused four samples more of the Rigi brand of milk to be analyzed. Each sample was obtained from a different store, and each sample was analyzed by a different chemist, neither knowing that the other had a sample. The result was as follows: No. 1, fat 1.15; No. 2, fat 1.29; No. 3, fat 2.26; No. 4, fat 1.35;

giving an average of fat equal to 1.51. This wide difference in the fat found by the different chemists is accounted for from the fact that the samples had different lot marks on them, showing that they were condensed on different days.

The samples of domestic milk and other brands of imported milk showed an average of 10.70 of fat, thus conclusively proving that the Rigi milk had been skimmed before condensing to the extent of at least eighty-five per cent.

I then called upon the importer of the Rigi milk, and notified him that the proof of the milk having been skimmed before condensing was conclusive, and that it could not be sold in New York State without violating the dairy law. The importer then stated that he had imported the milk in good faith supposing it to be pure, he also showed me letters and cablegrams from the exporters who still persisted in stating that the milk had not been skimmed.

The importer then said that he supposed the milk to be pure, and that he then had 300 cases in bond; that he would not sell, and that he would notify all of the parties to whom he had sold this brand of milk to return it to him, and that he would return them the price paid for the same. Several parties who had been handling the Rigi milk informed me that they had received such notice, and had returned what they had on hand to the importer.

The conclusion that I arrived at was, that all parties that were handling the Rigi brand of milk were doing so in the belief that it was pure milk, therefore, I did not cause the arrest of any of them.

No more of this adulterated milk was found in New York or Brooklyn by the State experts until this fall, when it was found in the hands of one wholesale and two retail dealers in Brooklyn. They were all three arrested, convicted and fined. The fact of the Rigi brand of milk being adulterated was fully discussed by the press during June and July last. For this reason there is every probability that these parties well knew the milk to be adulterated, and were willing to take the risk of detection for the small difference of profit that they could make on this milk over what they could make on pure milk.

I do not think any of the Rigi brand of milk has been imported into this city since June twenty-seventh of this year, when the three hundred cases spoken of went in bond. As I have had the

experts continually on the lookout for it, I think the parties who were prosecuted for selling the milk had kept it on hand since last June. I am informed by the importer of the milk that he notified one of the parties prosecuted to return what he had on hand to him, and that he did return a large quantity to the importer; still he sold the milk to one of the State experts more than two months after he, the dealer, knew it to be adulterated.

It will be necessary to keep a close watch during the coming year to prevent impure condensed milk from being imported into this State, as the exporters from European ports will be very likely to impose on other importers, or find some one that will be willing to handle the goods in violation of the law for the large profit there is in them.

In accordance with your directions on July 25, 1888, I detailed four of the State experts from this division of the dairy department for duty in the interior of the State, with instructions to inspect the milk being delivered to the creameries and cheese factories by producers to be manufactured into cheese.

They continued at this work most of the time up to September thirtieth, the end of the period covered by this report. Under the above instructions the experts visited and inspected the milk being delivered at a large share of the creameries and factories in the following named counties, viz.: Herkimer, Lewis, Oneida, Madison, Otsego, Chenango, Chemung, Onondaga, Cayuga, Schuyler and Seneca.

The milk delivered at 191 creameries and cheese factories in the above named counties was inspected, representing 3,662 dairies, comprising 10,237 cans, estimated at forty quarts each, and that 10,135 cans showed by lactometer test to be standard; and that only ninety-two cans showed by the same test to be slightly below; and tickets marked doubtful were given to the producers. These figures demonstrate that but a very small portion of the milk delivered at the creameries and cheese factories was of a doubtful character.

Both the creamerymen and factorymen were well pleased with the inspections, and nearly all of the farmers who delivered their milk at the creameries and factories in the eleven counties above named, were highly gratified to have the State experts inspect their milk when delivered.

The inspection of the milk had a very beneficial effect in removing suspicions on the part of the creamerymen, who, in many instances, had become impressed with the idea that a large share of the milk, delivered by the producers at the creameries, was adulterated, and in removing the suspicions from the minds of some of the producers, who, in many cases, thought that some of the producers, who were delivering milk at the same creameries they were, on the *pro rata* plan, were adulterating their milk with water, while the fact was proven that such cases were very rare. If the appropriation should be made large enough to permit the employment of sufficient force to inspect every creamery, and the milk delivered at them, at least twice in each season, it would well pay the outlay by removing misunderstandings between the producers themselves, as well as between the producers and creamerymen.

I embrace this opportunity with pleasure to acknowledge the courtesies extended to this department by the health boards of New York and Brooklyn.

I can only repeat what I said in my last report, in regard to the police court officers in those cities. They have in all cases attended to the business of the department with promptness and in an efficient manner; much of the work was done by the officers when they would have been off duty had it not been for the extra work caused by the large number of warrants issued in our prosecutions. They have in nearly every case summoned or arrested the parties against whom complaints were made and had them in court when wanted. This has caused them a great deal of labor in looking up parties, for which the thanks of the department is extended to them.

I am pleased to be able to state that the Court of General and Special Sessions in both New York and Brooklyn, as well as the police courts of the above-named cities, have given the numerous prosecutions brought by this department prompt, careful and special attention. The work of this division of the department has caused a great deal of extra labor in these courts, many times making it necessary to hold court after regular hours to conduct examinations and trials of cases; all of which has been done in a fair and equitable manner, and has been of great assistance to

the department in keeping the sale of adulterated milk and oleomargarine under control, for which the thanks of the department are heartily extended to the judges of all of the above-named courts.

The numerous prosecutions in the cities of New York and Brooklyn, have caused a large amount of work in the district attorneys' offices of the cities named, which has in all cases received prompt and careful attention by the district attorneys and their able assistants, and they have forwarded the business of the department in all cases to my entire satisfaction, for which the thanks of this department of the Dairy Commission is extended to them.

Several prosecutions have been brought in Queens and Westchester counties, and have, in all cases, received careful attention by the district attorneys in these counties, for which the department is indebted to them.

The large number of prosecutions that have been carried through the courts to a successful issue during the year covered by this report, have called for a great deal of attention on the part of the entire force in this division, consuming a large share of their time, and has received careful attention by all concerned. I am pleased to be able to state that each and every one of the counsel, chemist and experts have done their duty zealously, and have been of great assistance to me in accomplishing what I have the honor to report.

Respectfully yours.

B. F. VAN VALKENBURGH,

Assistant New York Dairy Commissioner.

REPORT OF F. D. TUTHILL.

HON. JOSIAH K. BROWN,

New York State Dairy Commissioner:

DEAR SIR.—The following is my report, as an Assistant State Dairy Commissioner since the date of my appointment thereto by yourself, viz.: November 1, 1887, until October 1, 1888, which I beg leave to respectfully present.

Immediately following the receipt of my appointment, as stated, I entered upon the discharge of the duties of such office, in the district or territory assigned to me by yourself, which included the counties of Chenango, Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, and that portion of Westchester lying north of the town of White Plains — same to be known as the third division of the dairy department of the State of New York, and to be under my immediate supervision and control. The division assigned me, having previously formed a part of the second division of the State dairy department, then under the supervision of Assistant State Dairy Commissioner Van Valkenburgh, of New York city, I at once conferred with him with the view of obtaining a more thorough knowledge and understanding of the duties devolving upon me, and to arrange for a proper division of the work originally embraced in the second division, so as to secure perfect harmony of action in the discharge of the work of our respective divisions, so strongly and necessarily allied together.

It is but proper that I should report that for much valuable information and assistance in the discharge of my duties in the capacity mentioned, which was kindly and cheerfully given at all times, I feel myself under obligation to my predecessor in this division, Mr. Van Valkenburgh. As a result of the interview spoken of between us, the experts or inspectors employed in the original second division were divided between us, with the mutual

understanding that they should work in either division, as the best interests of our respective divisions, or the department at large might require. It is well known to you that these two divisions are necessarily interwoven, making the inspection of milk intimately connected, and thus preventing, to a great extent, the practice of fraud that might otherwise be safely conducted while en route from the producer to the consumer.

The method of the inspection of milk, as agreed upon and practiced by us, is as follows: It is inspected by myself, or under my supervision, at the different railroad stations and at the boat landings, as it is delivered at those places for shipment by the different farmers and creamerymen, and again inspected under the supervision of Assistant Commissioner Van Valkenburgh on the wagons of the peddlers and in the stores and other places where it is kept for sale in the cities.

If, in the inspection last named any wrong is detected, I am at once notified of the marks on the cans containing the suspected milk, by which I am enabled to tell at what place it had previously been delivered to and shipped from.

For the reason that concert of action and understanding might be had by and between us, and because of the fact of my own prior inexperience, it has been my constant practice to visit the office of Assistant Commissioner Van Valkenburgh every Monday, where, together we would receive and hear the reports from the different experts for the preceding week, and arrange such plans and details for the work of the then present week as the best interests of our respective divisions would appear to demand. In this manner, I think more real good has been accomplished throughout the division under my jurisdiction, than could possibly have been effected, had I acted and worked in a manner wholly independent of him.

Regarding our inspection of milk, I have to say, that, in my experience, since entering upon the duties of my present position, it has been very rare, in fact, and almost impossible, to find a farmer among those who ship their milk direct to the city, who adulterates his product in the slightest manner, while among those selling and delivering to the creameries, frequent instances of adulteration of greater or less degree have been discovered.

Indeed, to such an extent is this pernicious habit of adulteration indulged in by many of the farmers in the class last mentioned, as I have discovered, that the habit bears the semblance of a purely chronic character, from which it would appear they are utterly powerless to extricate themselves. In each and every case of suspected adulteration of milk arising under the observation of myself, or either of the experts working in my division, it has been, and still is, our practice, to give the owner of the milk a ticket labeled, "apparently doubtful." And whenever this has occurred, we have always made it a rule to revisit the dairy as soon as practicable, and reinspect the milk, at which times, with some few exceptions we have found it to be all right. If, on the occasion of our second inspection-visit, the milk still gave evidence of adulteration, a sample of the same would be taken to a responsible chemist for analysis; in every case of which it was found to have been adulterated by the addition of water. Wherever in our inspections the milk appeared up to the standard quality, tickets labeled, "apparently standard," were given the owner of the same, so that due notice of credit, as well as due notice of warning, was given in every case.

The question: "If you find adulterated milk going into the creamery, why is it that you can not, by the same test, detect it when going out?"—has frequently arisen; to which I would reply as follows: Each creamery is supplied by its owner or manager, with, and uses precisely the same kind of instruments for the testing of milk as do our State inspectors, and hence, the creameryman knows exactly the standing of the milk from the dairy of each of his patrons daily, and by a system of his own, knows how to make the good carry the poor ones, and to so regulate it, that, upon going out, it bears the semblance of standard milk.

I am pleased to report, however, that the habit of adulteration seems to be gradually declining, as our more recent inspections have indicated, and in the majority of cases the creameries in this division are now receiving their milk in good condition and quality, only occasional instances of adulteration among their patrons being found. The fact that most of the producers take and deliver their milk to the creameries while it is still warm,

operates as a preventive against adulteration, except by water, which, when added, is sure of detection by the lactometer test as soon as delivered. In the preparation of the milk at the creameries for the market of the consumer, it is well known that the proprietors, as a rule, take particular pains to impress upon the minds of their foremen that it "must stand the lactometer test," which it is accordingly made to do before shipment, and a failure or omission in this particular, resulting in detection and subsequent prosecution and fine, the amount, whatever it may be, is to be deducted from the wages or earnings of such employé, as a penalty for the offense. That such are the facts I have been personally informed by a number of the foremen themselves.

I am well satisfied in my own mind that in this preparation of milk, not less than from four to six quarts of skimmed milk are added to each can of pure milk, though the lactometer test is powerless to detect its presence by any specific gravity alone. I am, therefore, of the opinion that more samples of their milk should be taken to a competent chemist for analysis, this being the only thorough and reliable method for the detection of such irregularities.

There appears to be a difference of opinion relative to the number of degrees of specific gravity to be added to, or taken from, for each degree of temperature; some contend that we should make a change of "three degrees of specific gravity for five degrees of temperature;" others say "two degrees for five degrees;" while still others say "three for five up to 75°, or down to 45°, and then one for one afterward." This variance of opinion leads me to suggest the employment of lactometers differently graded from those now in use in this division. As the milk inspected by us at the creameries is warm—about 80° to 90°—and that inspected at the stations and docks is very cold—40° to 50°—I would suggest the propriety of two lactometers, one being graded 100° specific gravity at 85° temperature and the other 100° specific gravity at 45° temperature, for use in the respective places named.

During the months of November and December of last year, 1887, we inspected nothing but milk at the different creameries and stations on lines of the several railroads in my division and

at the docks in Newburgh, Cornwall and other points, from which large quantities of milk, something over one thousand (1,000) cans are shipped daily by boat to the city. Running daily as it does for ten months in the year, this boat has become an important factor in the milk carrying trade, being a pecuniary advantage to the producer and shipper, as compared with others who are forced to ship by railroad exclusively. At the present time the boat is patronized principally by creamery men, many of whom carry their milk long distances, some as far as twenty miles from the place of shipment.

About the first of January last we began the visiting of stores, hotels, restaurants and other places where butter and milk were being sold in the towns and villages throughout this entire division to see if "oleo" and other unlawful substances were being sold, manufactured or used. We also inspected all the freight-houses thoroughly.

The places thus visited by the inspectors of this division, alone or accompanied by me, were Afton, Binghamton, Bainbridge, Chatham, Cornwall, Callicoon, Chenango Forks, Delhi, Deposit, East Branch, Ellenville, Fallsburgh, Fishkill, Ghent, Goshen, Greene, Haverstraw, Hancock, Harpersville, Kinderhook, Kingston, Lake Mahopac, Liberty, Livingston, Manor, Matteawan, Montrose, Mt. Kisco, Middletown, Monticello, Monroe, Nyack, Newburgh, Narrowsburgh, Norwich, New Berlin, Oxford, Philmont, Poughkeepsie, Peekskill, Red Hook, Rhinecliff, Rhinebeck, Rondout, Rockland, Stuyvesant, Sing Sing, Saugerties, Sidney, Tilly Foster Mine, Tarrytown, Union, Valatie and Whitney's Point; besides many other smaller villages along the N. Y., L. E. & Western and the O. & Western railroads and their several branches.

The reports of the inspectors covering the inspections made by them, as stated, fail to show that any "oleo" or any other manufactured substitute for butter was discovered by them, or either of them, in any of the places visited; and the same may be said respecting the places visited and inspected by me.

The reports made also show that in every instance the proprietors or the managers of the places visited displayed a perfect willingness to have their stores or places of business inspected,

and appeared glad to see us around looking after the fraudulent article being sold under the name of butter.

At your request, expert Charles Sears, of this division, joined you at Owego, in Tioga county, on the first day of February last, when arrangements were made between you for a tour of inspection by him of the towns and villages located in the central and western parts of the State, and from which he did not return until the middle of May last.

On the fifteenth day of March last, and at your request, experts Griffis and Dubois, of this division, began a tour of inspection of towns and villages situate along the lines of the New York Central and West Shore railroads, visiting the following named places: Canajoharie, Canastota, Frankfort, Fonda, Fultonville, Gloversville, Herkimer, Ilion, St. Johnsville, Johnstown, Little Falls, Mayfield, Northville, Newport, Oneida, Fort Plain, Poland, Rome, Syracuse, Utica and other smaller places, completing the same on April twenty-second last.

The reports of these experts were that neither of "oleo" nor any of its kindred products were upon the markets as an article of sale or trade, while the milk inspected was found to be of good standard quality. It is but proper that I should say that the experts are under standing instructions, whenever visiting a place for the ostensible purpose of milk inspection only, that they be on the alert also for the discovery of "oleo" or any unlawful product within their jurisdictional province.

The system of inspection, as adopted in this division and myself, was about as follows:

On arrival at a place having a directory, one was consulted, the stores and other places dealing or engaged in the manufacture of butter and milk were located, following which a tour of thorough inspection of each place was made; by an examination of all tubs or other vessels containing butter then on hand, purchasing, at times, small quantities at the stores, and by eating at the hotels, restaurants, boarding-houses and other places. Freight-houses were also visited, and the packages, supposed to contain butter, were closely inspected; if, from the marks or other indications, the package or packages bear the least impress warranting suspicion, the same is looked after until its arrival at its place of destination.

From the inspections made and reported upon as shown, as well as from the extreme precautionary measures taken to detect fraud at all points, I do not think that there has been any "oleo" or other butter substitute manufactured or sold during the past year in any of the country places named or inspected by us.

About July first, last, information reached me to the effect that a man named Van Sickle, of the village of Port Jervis, in this county, was manufacturing "oleo," or using some foreign deleterious substance in the butter made by him, and, upon the receipt of such information, an expert was at once sent to investigate the matter. A sample of the alleged bogus product was taken to a chemist in New York city for analysis, who pronounced it to be genuine butter.

About the 1st of October, 1887, while two of the experts of this division were engaged in inspecting the milk then being shipped on the Pine Island branch of the N. Y., L. E. and W. R. R., the milk shipped from the creamery at Pine Island, and owned by Brice P. Walling, who is also the proprietor of another creamery at Deckertown, New Jersey, was discovered to be of a doubtful nature, and a ticket labeled "doubtful" was returned to him. On the twelfth of the same month the milk shipped from the same creamery was again examined, and, finding it to be of no better quality, a sample of the same was taken to the chemist of New York city, who, upon analysis, pronounced it "adulterated." This case of violation being in the territory under my jurisdiction, Assistant Dairy Commissioner Van Valkenburgh transferred it to me for legal action.

Again, on the 15th of November, 1887, while inspecting the milk at Cornwall, in this county, the milk coming from the creamery of one James C. Rider, of Central Valley, in this county, was by us adjudged to be doubtful. This is the same individual to whom Assistant Dairy Commissioner Van Valkenburgh referred in his annual report for 1887 as follows:

"One creameryman had the audacity to call on me and make the following statement: That he was selling his milk at wholesale and retail in Brooklyn; that he thought some of the farmers delivering their milk at his creamery watered it; that he feared that the milk would be brought below the standard by rea-

son of the supposed watering, and the addition by himself, as he acknowledged of five quarts of skimmed milk to every thirty-five of pure milk, and that he was fearful lest the Dairy Commissioner, or the Board of Health, should prosecute him. In fine, he wanted to be protected against the fraud of the farmers in order to consummate his own fraud on his customers."

Thinking he had sufficient warning, and realizing his persistent and deliberate determination to practice fraud, the usual ticket-mark, "doubtful," was in his case omitted, and a sample of the milk inspected was taken to a chemist for analysis, who pronounced the same adulterated.

Prosecution for both of these offenses was then determined upon, and was accordingly commenced by the employment of Hon. George W. Greene, a successful and eminent attorney of Goshen, in this county, as counsel for the Commission. Upon consultation and advice of counsel, proceedings were instituted under section 19, chapter 583, of the Laws of New York of 1887, for the recovery of a civil penalty of \$100 and costs, for each violation, action for which was brought in the Supreme Court of our State. The summons in the action against Brice P. Walling, was served on the defendant on the 24th day of December, 1887, by the sheriff of this county, returnable in twenty days thereafter; knowing that he could not successfully defend the action before a jury, he gave us no additional trouble, but effected a settlement with the counsel for the Commissioner on the 13th day of January, 1888, by the prompt payment of the amount demanded in our complaint.

In the case of the Commission against James C. Rider for the violation referred to, the summons was served on him personally by the sheriff of this county, on the 18th day of January, 1888, to which response was made by the prompt settlement and payment of the demand made as in the preceding case.

On the fifth day of June last, on an inspection of the milk delivered at the cheese factory of a Mr. Tody, located at Monroe, in this county, the product of four different farmers was considered suspicious, and a ticket labeled, "apparently doubtful," given to each one. On the twelfth of the same month, two experts, under my direction, made another inspection of the milk of the

farmers previously warned, when the milk of two of them was found to have been improved in quality, while that produced by the remaining two, James Cregan and Thomas Caren, was considered doubtful. A sample of each was taken to a chemist for analysis, who declared each one adulterated. Upon receiving which opinion, our counsel, Judge George W. Greene, was directed to and did begin suit against each of the offending parties in the same manner and under the same statute under which the suits previously mentioned had been instituted. Summons in the actions for the violations last cited were served upon the defendants upon the eleventh and made returnable on the thirty-first day of July last. While some correspondence was pending between Judge Greene and yourself relative to the strict enforcement of the penalty clause in the law, the twenty days provided in the summons in the respective cases for answer expired. The time was therefore extended, but both cases, before the expiration of the extension of time granted, were satisfactorily settled by the payment of the amount demanded in each case.

On the twenty-second day of June last, expert Sorogan, in company with myself, visited Matteawan, in Dutchess county, bought a sample of milk from one Wm. H. White, a storekeeper there, who also runs three wagons engaged in peddling milk through the streets of that village.

Upon analysis of the sample purchased it was found to be skimmed milk, and was being sold, as we claimed, in open violation and defiance of the law.

Action against this dealer similar to those already taken against others was begun by our counsel, Judge Greene, who caused a summons to be served on Mr. White on the seventh day of July last, returnable on the twenty-seventh of the same month. The time for answer having been extended, he, the defendant, did, on the sixteenth day of August, file an answer to the summons and complaint served, and asked for trial, which, in all probability, will come off at the November term of court, to be held at Newburgh, in this county.

During the last week in July I received from you a communication to the effect that for the next two months we should devote

our attention to the inspection of the butter creameries and cheese factories of the State, also to the milk as it was delivered at those places by the farmers.

On August first I visited the creamery at New Paltz, Ulster county, owned and conducted by the firm of Slaughter & Harlow, and inspected the milk as it was delivered there by the farmers. Out of twenty-two patrons of that creamery, six were, in my opinion, bringing watered milk, to each of whom I issued doubtful tickets.

At the request of the foreman of the creamery I provided him with the names of the farmers whose milk was suspected as doubtful, for the reason, as he stated, that he would not ship it, but skim it for cream. About the last of the same month two experts, under my direction, visited the same creamery, when samples were taken from three of those to whom I, on my visit, had given warning tickets, viz., Watson Elting, Fred. Zimmermann and Daniel Gaffney, and subsequently found to have been adulterated. A short time after this I received information from an expert in Brooklyn that he had found some adulterated milk at one Bosch's, a dealer there, that had been shipped from the creamery at New Paltz. Acting on this information I detailed two experts there September twenty-fifth, with instructions to take a sample from each of the cans in their opinion most adulterated, which was done, and it was found to be below twelve per cent solids.

Information also reached me about the middle of September that, in the opinion of my informant, impure milk was being peddled around the streets of Saugerties; I detailed two experts to visit that place and Hudson and inspect the milk being sold there.

Analysis of the samples taken from John M. Genthier and Jesse Frasier, in Saugerties, and from Luke Power, in Hudson, proved them all to have been adulterated by the addition of water.

These cases will be prosecuted as soon as possible, and will be included in my next annual report.

In obedience to the instructions from you, already referred to, the experts in this division inspected a total of 147 butter creameries and cheese factories in the following named counties, to wit: Broome, Chenango, Cayuga, Delaware, Lewis, Madison,

Onondaga and Otsego, besides the milk as it was delivered from 3,334 dairies, comprising a total of 8,968 cans, estimated at forty quarts each, of which 8,918 cans, by lactometer test, proved to be standard grade, and tickets marked "apparently standard" were issued and given to the several producers of the same. By the same test some fifty cans showed slight evidences of adulteration, to the producers of which "doubtful" tickets were given. Then, again, complaints have been received by me from persons in charge of creameries and factories to the effect that some of their patrons were supplying them with a poor quality of milk, but, upon investigation in most cases, we satisfied the complaining parties that the suspicions entertained by them were groundless.

I desire to impress upon the minds of the farmers, and of yourself, the disadvantage we continually labor under in our inspections of the milk as shipped by the different creamerymen, almost every one of whom mixes more or less skimmed milk with the pure which they send to the city market.

While the average of pure milk contains over thirteen per cent of solids and about 3.75 per cent of fat, the law says that milk containing less than twelve per cent of solids and three per cent of fat shall be considered adulterated. Then the creameries assume that milk coming up to this standard is legally pure. Their apparent aim is to reduce it down to the lowest standard possible and yet be within the requirements of the law. In conversation with them upon the subject this fact is not denied.

Having made this matter their close study for the past four years, or longer, it has become a simple matter of practical science with them, for which reason I contend that nothing but a chemical analysis will detect it.

In view of this I would respectfully suggest the employment of a competent chemist by your department annually, to be located at some convenient place, to whom we could take our samples of milk, butter, etc., at all times of the year for careful and reliable analysis.

Without exception I may say that all of the owners of the different butter creameries and cheese factories appeared pleased to have their buildings and products inspected, and many of them expressed their desire to see us more frequently. This same

disposition prevailed largely among the farmers also, though I would particularly mention that class of farmers who were directly interested in a creamery or factory conducted upon what is known as the coöperative system, and all of whom shared proportionately in the profits and losses of the concern in which they were associated.

Blanks were furnished by you to the different experts to be by them filled out at each creamery or factory inspected, respecting the drainage, cleanliness and general surroundings of the same; also as to the number of patrons of each, number of cows in the dairies furnishing their supply, number of pounds of milk received daily, number of pounds of butter, cheese, or both, made daily, average price per pound received, besides other information that can not fail to be of value to the dairymen of our State, when they shall appear, as they undoubtedly will, in your forthcoming annual report to the Legislature of our State, as they, the blanks, have all been filled out as required, and returned to you.

Samples of milk were taken from Benj. F. Lewis, of Tioga county, and from Isaac E. Quick, of Chemung county, by expert Sears, which, on analysis, were proven to have been adulterated. These cases not arising within my division, Mr. Sears was directed by me to communicate with you concerning the disposition to be made of them, and afterwards reported them as having been placed in the hands of the district attorneys of those counties respectively.

The result of the inspections enumerated has been the commencement of actions of either a civil or criminal nature against three creamerymen, seven farmers, three peddlers and one store proprietor.

The total amount of fines collected by our counsel, Judge Greene, from the cases prosecuted, as reported herein, was four hundred dollars (\$400), all of which was paid over to me and by me transferred as follows: One-half to the State Treasurer and one-half to the county treasurer of this county, whose receipts I now hold in my possession as vouchers therefor.

The following table gives a statistical and detailed statement of the work performed by each employé in this division of the depart-

ment during the year ending September 30, 1888, in the enforcement of the laws under which your department was created and organized, and is now being conducted :

Chas. Sears, expert, employed inspecting butter 112 days :

Number of days in courts.....	.....
Number of days obtaining evidence.....	2
Number of days on special duty.....	4
Number of days inspecting stores.....	53
Number of days visiting hotels, restaurants and boarding-houses.....	53
Total number of days.....	<u>112</u>

Number of samples purchased and taken.....	240
Number of samples delivered to chemists.....	2
Number of evenings obtaining samples.....	.....
Number of appearances in cases.....	.....
Number of complaints made.....	.....
Number of hotels, restaurants and boarding-houses visited.....	240
Number of stores inspected.....	1,509
Estimated number of miles traveled.....	11,330
Samples of oleomargarine taken at stores on inspection..	2
Samples of oleomargarine purchased at restaurants.....	<u>.....</u>

O. C. Griffis, expert, employed inspecting for oleomargarine eighty-one days :

Number of days in court.....	.....
Number of days obtaining evidence.....	8
Number of days on special duty.....	28
Number of days inspecting stores.....	22
Number of days visiting hotels, restaurants and boarding-houses.....	23
Total number of days.....	<u>81</u>

Number of samples purchased and taken.....	186
Number of samples delivered to chemists.....	.....
Number of evenings obtaining samples.....	47
Number of appearances in cases.....	.....
Number of complaints made.....	.....

Number of hotels, restaurants and boarding-houses visited	196
Number of stores inspected	506
Estimated number of miles traveled.....	7,050
Samples of oleomargarine taken at stores on inspection..	.....
Samples of oleomargarine purchased at restaurants.....	.....

T. C. DuBois, expert, employed inspecting for oleomargarine, sixty-one days :

Number of days in court.....	.....
Number of days obtaining evidence.....	1
Number of days on special duty.....	10
Number of days inspecting stores.....	22
Number of days visiting hotels, restaurants and boarding-houses	28
Total number of days.....	<u>61</u>

Number of samples purchased and taken.....	107
Number of samples delivered to chemists.....	.....
Number of evenings obtaining samples.....	22
Number of appearances in cases.....	.....
Number of complaints made.....	.....
Number of restaurants visited.....	28
Number of stores inspected.....	321
Number of miles traveled.....	800
Samples of oleomargarine taken at stores on inspection..	.....
Samples of oleomargarine purchased at restaurants.....	.....

Recapitulation of days employed and services rendered inspecting for oleomargarine by all the experts named in the previous tables :

Number of days in court.....	.....
Number of days obtaining evidence.....	11
Number of days on special duty.....	42
Number of days inspecting stores.....	37
Number of days visiting hotels, restaurants and boarding-houses	104
Total number of days.....	<u>254</u>

<i>NEW YORK STATE DAIRY COMMISSIONER.</i>	615
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Number of samples purchased and taken.....	533
Number of samples delivered to chemists.....	2
Number of evenings obtaining samples.....	69
Number of appearances in cases.....	
Number of complaints made.....	
Number of restaurants, hotels and boarding-houses visited.....	454
Number of stores inspected.....	2,336
Number of miles traveled.....	19,180
Number of samples of oleomargarine taken at stores....	2
Number of samples of oleomargarine purchased at restau- rants, hotels and boarding-houses.....	

T. C. DuBois, expert, employed in the inspection of milk 124 days:

Number of days in court	1
Number of days inspecting milk.....	89
Number of days obtaining evidence.....	13
Number of days on special duty.....	21
Number of days inspecting herds.....	

Total number of days	124
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Number of creameries inspected as to condition.....	16
Number of condenseries inspected as to condition	
Number of butter creameries and cheese factories inspected as to condition.....	37
Number of milk peddlers inspected.....	162
Number of stores inspected	32
Number of stables inspected	
Number of cows inspected	
Number of creamerymen's milk inspected on delivery at boat and railroad depots	33
Number of dairymen's milk inspected on delivery at creameries and railroad depots	849
Number of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	650

Number of cans of creamerymen's milk inspected on delivery at boat and railroad depots.....	1,827
Number of cans of dairymen's milk inspected on delivery at creameries and railroad depots.....	2,354
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	1,915
Number of cans of peddlers' milk inspected.....	1,422
Total number of cans of milk inspected.....	<u>7,518</u>

Number of samples delivered to chemists.....	6
Number of complaints made.....	2
Number of appearances in cases.....	2
Estimated number of miles traveled.....	<u>10,830</u>

Chas. Sears, expert, employed in the inspection of milk 198 days:

Number of days in court.....	7
Number of days inspecting milk.....	136
Number of days obtaining evidence.....	12
Number of days on special duty.....	39
Number of days inspecting herds.....	4
Total number of days.....	<u>198</u>

Number of creameries inspected as to condition.....	62
Number of condenseries inspected as to condition.....	.....
Number of butter creameries and cheese factories inspected as to condition.....	29
Number of milk peddlers inspected.....	18
Number of stores inspected.....	45
Number of stables inspected.....	5
Number of cows inspected.....	166
Number of creamerymen's milk inspected on delivery at boat and railroad depots.....	51
Number of dairymen's milk inspected on delivery at creameries and railroad depots.....	544
Number of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	<u>629</u>

Number of cans of creamerymen's milk inspected on delivery at boats and railroad depots.....	2,524
Number of cans of dairymen's milk inspected on delivery at creameries and railroad depots	1,905
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories	1,966
Number of cans of peddlers' milk inspected	84

Total number of cans of milk inspected	6,479
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Number of samples delivered to chemists.....	9
Number of complaints made	14
Number of appearances in cases.....	14
Estimated number of miles traveled	9,575

J. R. Wheeler, expert, employed in the inspection of milk 104 days :

Number of days in court.....	2
Number of days inspecting milk.....	71
Number of days obtaining evidence	
Number of days on special duty	31
Number of days inspecting herds	

Total number of days.....	104
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Number of creameries inspected as to condition	14
Number of condenseries inspected as to condition	1
Number of butter creameries and cheese factories inspected as to condition.....	33
Number of milk peddlers inspected	110
Number of stores inspected	
Number of stables inspected	
Number of cows inspected	
Number of creamerymen's milk inspected on delivery at railroad depots	10
Number of dairymen's milk inspected on delivery at creameries and railroad depots.....	247

Number of dairymen's milk inspected on delivery at butter creameries and cheese factories	785
Number of cans of creamerymen's milk inspected on delivery at railroad depots	384
Number of cans of dairymen's milk inspected on delivery at creameries and railroad depots	949
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories	1,784
Number of cans of peddlers' milk inspected	181
Total number of cans of milk inspected	<u>3,298</u>

Number of samples delivered to chemist	1
Number of complaints made	1
Number of appearances in cases	2
Estimated number of miles traveled	<u>7,500</u>

O. C. Griffis, expert, employed in the inspection of milk 224 days:

Number of days in court .....	.....
Number of days inspecting milk	176
Number of days obtaining evidence	13
Number of days on special duty	34
Number of days inspecting herds	1
Total number of days	<u>224</u>

Number of creameries inspected as to condition .....	.....
Number of condenseries inspected as to condition	31
Number of butter creameries and cheese factories inspected as to condition	48
Number of milk peddlers inspected	7
Number of stores inspected	55
Number of stables inspected	1
Number of cows inspected	23
Number of creamerymen's milk inspected on delivery at boat and railroad depots	40

Number of dairymen's milk inspected on delivery at creameries and railroad depots.	1,187
Number of dairymen's milk inspected on delivery at butter creameries and cheese factories	1,270
Number of cans of creamerymen's milk inspected on delivery at boat and railroad depots.	1,878
Number of cans of dairymen's milk inspected on delivery at railroad depots	3,308
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories	3,303
Number of cans of peddlers' milk inspected	25

Total number of cans of milk inspected	<u>8,514</u>
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Number of samples delivered to chemists	4
Number of complaints made
Number of appearances in cases
Estimated number of miles traveled	<u>9,275</u>

J. J. Sorogan, expert employed in the inspection of milk twenty-five days :

Number of days in court	1
Number of days inspecting milk	19
Number of days obtaining evidence	3
Number of days on special duty	2
Number of days inspecting herds

Total number of days	<u>25</u>
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Number of creameries inspected as to condition	6
Number of condenseries inspected as to condition
Number of butter creameries and cheese factories inspected as to condition .....	.....
Number of milk peddlers inspected	6
Number of stores inspected	1
Number of stables inspected .....	.....
Number of cows inspected .....	.....
Number of creamerymen's milk inspected on delivery at boat and railroad depots .....	.....

Number of dairymen's milk inspected on delivery at creameries and railroad depots	191
Number of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	
Number of cans of creamerymen's milk inspected on delivery at boat and railroad depots.....	
Number of cans of dairymen's milk inspected on delivery at creameries and railroad depots.....	711
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	
Number of cans of peddlers' milk inspected.....	25
Total cans of milk inspected.....	736
Number of samples delivered to chemist.....	1
Number of complaints made.....	1
Number of appearances in cases	1
Estimated number of miles traveled.....	2,584
Recapitulation of days employed and services rendered in the inspection of milk by all the experts named in previous tables :	
Number of days in court.....	11
Number of days inspecting milk	491
Number of days obtaining evidence.....	41
Number of days on special duty.....	127
Number of days inspecting herds.....	5
Total number of days.....	675
Number of creameries inspected as to condition.....	129
Number of condenseries inspected as to condition.....	1
Number of butter creameries and cheese factories inspected as to condition.....	147
Number of milk peddlers inspected.....	303
Number of stores inspected.....	133
Number of stables inspected.....	6
Number of cows inspected.....	189
Number of creamerymen's milk inspected on delivery at boat and railroad depots.....	134

Number of dairymen's milk inspected on delivery at creameries and railroad depots.....	3,018
Number of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	3,334
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Number of cans of creamerymen's milk inspected on delivery at boat and railroad depots.....	6,613
Number of cans of dairymen's milk inspected on delivery at creameries and railroad depots.....	9,227
Number of cans of dairymen's milk inspected on delivery at butter creameries and cheese factories.....	8,968
Number of cans of peddlers' milk inspected.....	1,737
<hr/>	
Total cans of milk inspected.....	26,545
<hr/>	
Number of samples delivered to chemist.....	21
Number of complaints made.....	18
Number of appearances in cases.....	19
Estimated number of miles traveled.....	39,764
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A careful summary of the preceding table shows that in this division, the experts have inspected the milk, as shipped from 134 creameries, comprising 6,613 cans, of which number 6,555 cans were shown by lactometer test to contain milk of "apparently standard" quality, while but fifty-eight cans by the same test were found to have been below that grade. Within and during the time stated, the milk from 3,018 dairies was inspected as delivered by the farmers at the creameries and railroad depots, comprising a total of 9,227 cans, of which 9,182 by the lactometer test were of standard quality, and forty-five cans showed slight evidence of adulteration. In addition to the above, the milk from 3,334 dairies was inspected as it was delivered to the different butter and cheese factories hereinbefore mentioned, comprising a total of 8,968 cans, of forty quarts each, and that while 8,918 cans were of standard quality, only fifty cans failed to meet the regulation test. The milk as sold by 303 peddlers and from stores in the different places visited by the experts, and as inspected by them, comprising a total of 1,737 cans, of which number only seven cans were discovered as of an inferior grade.

The following summarized table, in recapitulated form, will show more plainly the result of our investigations by the lactometer test, with the percentage of each :

	Cans.	Per cent.		Cans.
134 Creamerymen's milk	6,613	.009..	doubtful	58
3,018 Dairymen's milk at creameries and depots.....	9,227	.005..	doubtful	45
3,334 Dairymen's milk, butter cream- eries and factories.....	8,968	.006..	doubtful	50
303 Peddlers and store dealers' milk	1,737	.004..	doubtful	7

Making a total number of cans inspected 26,545, of which 160 contained slight indications of adulterations.

In comparing the figures given herein with the report of the Assistant Dairy Commissioner Van Valkenburgh, as by him rendered last year, it will be found that the percentage of doubtful milk has lessened considerably ; demonstrating to you and more especially to the dairying interests of the State at large, the valued importance of a systematic and thorough inspection of our whole State at least once in each year. I am of the opinion, also, that if such an inspection could be practically conducted once in every six months, the practice of milk adulteration would be soon consigned to the long roll of lost arts.

As a resident and milk producer for many years of one of the greatest, as well as most favorably noted milk-producing counties of our State, for the New York and its kindred city-markets, and knowing the extreme care and attention we are necessarily compelled to give our milk that it may reach its destination in a pure and healthy marketable condition, I have to respectfully recommend to all dairymen of those counties, known as butter and cheese counties, that they take better care of their milk at home over night, it being such a perishable article, and more especially should this be done in warm weather, for when first drawn from the cow, it will absorb almost any contaminating odor with which it may come in contact. Knowing this, the farmers throughout this section are particular to provide themselves with a number of cans holding forty quarts each, estimating the number at one for each cow in the dairy, all

marked and ready to be shipped to the market when required. As rapidly as these cans are filled with warm milk they are immediately taken to a separate house or room provided for the purpose, and placed in running water, not warmer than 50° Fahrenheit; or if not so favored with running water, then the cans of milk are placed in ice-water, in which they are allowed to remain until the time for taking to the boat or car. Nearly every milk producer in this county, whether he possesses the advantage of cool running water or not, provides himself with sufficient ice each winter to last him during the entire coming season, and by which means he is prepared to take the best of care of his milk.

This precaution I have thought proper to make, because by the reports of the experts coming under my notice I am advised that the majority of the dairymen of the class last referred to are in the habit of leaving their cans of milk exposed over night, or longer, to the elements of the weather, being neither housed nor covered in any form, while the idea of taking the trouble to place it in running water is among the inventions never heard nor thought of by them. I have not the slightest doubt that the careless manner in which these dairymen keep their milk at home over night causes more tainted and adulterated milk than any other one thing.

This opinion is strengthened, also, by the information embodied in the report of the experts to the effect that on several occasions and at different factories, when engaged in their inspections, or mornings following a heavy shower of rain during the previous night, the foreman of the factory, after receiving and weighing the milk, would question each patron as to his estimated quantity of water that had fallen into his milk from the rain. A certain amount of pounds would be admitted in the reply given, for which amount deduction would be made in the allowance delivered.

Now, then, this being a matter of pure guess-work alone, I hold it to be an imposition on the purchaser of the milk, and on his neighbors as well, if the factory is conducted upon the coöperative system, if not an injustice to himself at the same time.

I would suggest that the proprietor or proprietors of a factory, engaging milk from the farmers, insist upon it as one of the conditions of the agreement that each farmer keeping his milk at

home over night shall place it in a box of cool water, situated in a house or room set apart and maintained for such use only, thus permitting the lids to be wholly removed from the cans and the free escape of all animal heat from the milk.

The farmer contemplating the establishment of a factory for the purpose named, in conjunction with his neighbors and to be conducted upon the coöperative plan, I would, also, advise that he take particular care to have a rule of the above purport inserted into the agreement or by-laws governing such association, and that it be strictly adhered to by all who may be included or interested therein.

Should this care be exercised by all dairymen, I am of the further opinion that the standard of their milk, as well as the product thereof, would be largely increased, and that, when once inaugurated by and among them, they will not again revert to the old, careless and totally unreliable system now in vogue in their management of the milk-producing business.

In conclusion I am pleased to report that, in the discharge of my duties as Assistant State Dairy Commissioner, I have been greatly assisted by the experience, courtesy and general desire of the experts in this division to do all within their power to render my duties as pleasant as possible, and to promote the efficiency of the department in all its particulars.

Very respectfully submitted.

F. D. TUTHILL,
Assistant State Dairy Commissioner.

WASHINGTONVILLE, ORANGE COUNTY, N. Y., *October 1, 1888.*

REPORT OF M. A. PERRY AND P. J. SUTLEY, ASSISTANT DAIRY COMMISSIONERS.

BUFFALO, *October 1, 1888.*

HON. JOSIAH K. BROWN,

New York State Dairy Commissioner, Albany N. Y.:

DEAR SIR.—We beg leave to submit the following report of the work of the Dairy Commission done under our supervision in the western part of the State during the year ending on the 30th day of September, 1888.

We have concluded to submit a joint report of the work performed in this section for the reason that there has been no special division of territory between us, and have, therefore, in nearly all the work pertaining to the department, acted in concert. We have each exercised the authority vested in us, and performed our duty in such portions of the territory as we deemed proper, and have acted together in directing the labor of employés of the department under our charge, and the work performed has been of such character that we believe that, together, we can present a more succinct and intelligent report of it than we could by making individual reports.

In the last annual report of Assistant Commissioner Perry it was stated "that on the 1st day of July, 1886, at the urgent and persistent request of H. W. Richardson, Esq., one of the members of the cheese manufacturing firm of Richardson, Beebe & Co., proprietors of the Marshfield and Cloverfield Cheese Factory Combination, Mr. Schurr, of Holland, Erie county, N. Y., who was one of the patrons of said cheese combination, was notified that milk delivered by him to a certain cheese factory in Holland, in said county, on the 16th day of June, 1886, to be manufactured into

cheese, was impure and adulterated, and payment was demanded of the penalty therefor. Said Schurr denied the charge and declined and refused to pay the same. This being, apparently, a clear case of violation of the dairy laws, at the urgent request of Mr. Richardson, on the sixth day of July, a civil suit was commenced against the said Schurr in the Supreme Court of the State, in Erie county. The defendant filed an answer in the case. This case has been put on the calendar of said court several times for trial, but owing to the absence of Professor Witthaus, the chemist who made the analysis of the milk, and by my inability to procure his attendance, I have been compelled to consent that the case should go over. This case was noted for trial on the fifth day of the present month of December, but owing to the absence of Professor Witthaus I was obliged to put the case over the present term."

This case was again noticed for trial at the April term of the court, and was set down for trial for April 23, 1888. Professor Witthaus was subpoenaed on April twenty-first at New York, but had been previously subpoenaed to attend as a witness in a murder trial at Yonkers for the same day. This case was held for several days and, Professor Witthaus not being able to attend, again went over the term. It is confidently expected that this case will be tried at the next term of the court which convenes on November 26, 1888, and arrangements have been made to have Professor Witthaus here at that time. Extreme difficulty has been experienced in procuring his attendance here as a witness since his removal to New York, and the delays in this, as well as other cases heretofore, are attributable largely, if not entirely, to this cause.

The case of the people against one George Fox, against whom an action to recover the statutory penalty for selling adulterated milk on July 14, 1885, at the city of Buffalo, commenced on the 20th day of July, 1886, and which, as reported by Assistant Commissioner Perry in the last annual report, was then pending, and had been continued from term to term on account of the absence of Professor Witthaus, is still undetermined and pending for the reasons stated above, in relation to the Schurr case.

The above-mentioned two actions are all the cases to recover penalties that have been commenced by authority of the Assistant Dairy Commissioners in the western part of the State that are still pending and undetermined.

There is every reason to believe that the people will ultimately succeed in recovering a judgment in both of these cases against the defendants whenever a trial thereof can be had.

The following list contains the names of all persons against whom prosecutions have been commenced in the police court of Buffalo, during the current year, for offering for sale and for selling impure, adulterated and unwholesome milk, and their residences, viz : William A. Torge, Buffalo, N. Y. ; Edward C. Beiser, Buffalo, N. Y., and John T. Lannen, Buffalo, N. Y., all of whom were duly convicted.

The following persons have been convicted in the police court of Buffalo during the present year for selling adulterated milk, and have each been fined the amounts set opposite their respective names, which fines have all been paid :

William A. Torge, convicted, fined.....	\$25 00
Edward C. Beiser, convicted, fined.....	25 00
John T. Lannen, convicted, fined.	25 00
	<hr/>
Total amount of fines collected.....	<u>\$75 00</u>

Of the above amount of fines collected the police justice of the city of Buffalo has paid the sum of thirty-seven dollars and fifty cents to the State Treasurer, being one-half of the fine collected in each case. The two inspectors in the employ of this department in the city of Buffalo, have, during the past year, made inspection of milk exposed for sale by peddlers and storekeepers in the city of Buffalo as follows :

By George H. Palmer.....	2,142
By Michael Galligan.....	2,780
	<hr/>
Total number of inspections.....	<u>4,922</u>

Samples of suspected milk were taken for examination and were tested with the lactometer and cream guage (Spence's forced method) as follows :

By Michael Galligan.....	470
By George H. Palmer.....	160
Total number of samples of suspected milk tested..	<u>630</u>

These samples were taken for examination where the milk appeared on inspection to be of doubtful quality. The lactometer and cream gauge tests showed that only five per cent of the samples taken were below the standard. In each case where a sample of milk was taken for examination the inspector issued a certificate to the dealer from whom it was taken showing the standard of his milk, making 630 of such certificates issued during the year. These inspections were often made upon the request of the dealers themselves, who have come to rely for protection upon this department, and the system of giving certificates has found much favor amongst them. The inspectors still meet with some resistance from certain peddlers, and have been subjected to assaults in two or three instances during the past year, under somewhat aggravating circumstances. Nothing, however, has been done in the way of punishing these persons for such assaults, because in one instance particularly the assault was made by a boy some 16 or 17 years old, who was in charge of a milk wagon, and who probably was not aware of the authority of the inspector, and for the further reason that it was not deemed advisable to have our officers appearing in the police court as aggrieved parties too often, and as the defendants would usually have a large number of witnesses to dispute the unsupported testimony of our inspector.

In addition to the milk inspections made in Buffalo by the above-named inspectors they have been detailed to visit the adjoining towns and counties to make inspections and to take samples of suspected milk for analysis from farmers sending milk to this city and of persons delivering milk to cheese factories. These visits were made upon the complaints of the dealers here who obtained their supplies of the farmers, and of the managers or patrons of the different cheese factories.

During the year there were delivered to the chemists for analysis seventy-four (74) samples of milk by expert George H. Palmer.

Of this number, the number taken from dealers in the city of Buffalo was	36
The number taken from farmers who sent milk to the dealers of the city of Buffalo	10
The number taken at cheese factories was	28
Total samples taken and delivered to chemists	<u>74</u>

Of this number of samples delivered to chemists for analysis, twenty-nine proved to be adulterated, and it was found that sixteen of such adulterated samples were taken from the dealers in this city; four of such adulterated samples were taken from farmers, and nine of such adulterated samples were taken at cheese factories.

The system of inspection in the city of Buffalo has been very thorough, and the result shows a very satisfactory condition of the milk supply of said city, and in most of the cases here which have proven to be below the standard the adulteration has been comparatively slight. Dealers, as a rule, regard our efforts to improve the quality of the milk supply with much favor, and extend every facility to our inspectors to aid them in their work. The prejudice that existed against the officials of this department, when work was first commenced here, has disappeared. There is no longer any association of milk dealers to resist the enforcement of the dairy laws, and when an offender is caught there is but little resistance in the courts. In fact, the majority of the complaints made to us come, not from the consumers, but from the dealers themselves who buy their milk in the country and who make almost daily requests to have the milk sent to them tested. That their requests are justified to some extent, and that there is foundation for their complaints, is shown by the results of the chemical analysis of the samples of the milk taken from the farmers who supply them. The majority of the milk dealers of this city have become convinced that the efforts of this department are a benefit rather than an injury to them; that this department is a permanent part of the State government designed in the interests

of the people, and that violation of the law will not be tolerated. They consequently are furnishing to the citizens of this city pure and wholesome milk, and are endeavoring to keep within the law, and to protect not only themselves but their customers by insisting that the producers who supply them, shall likewise observe the law and shall not place them in jeopardy of fine or imprisonment by furnishing them adulterated milk. There are still some dealers who persist in violating the law, as there probably always will be, but the number is very small, as is shown by the results of the inspection of our agents and the analyses made by the chemists, and we believe that the quality of milk furnished here in the aggregate is as good as can reasonably be expected in a city of this size, having so large a number of milk dealers.

Of the twenty-nine persons who have been detected in selling adulterated milk in this city and vicinity, as stated above, three have been convicted in the police court of Buffalo, as hereinbefore reported, and prosecution will be commenced against the thirteen other city dealers as soon as the work of the department now under way, in the inspection of cheese factories, is completed, and the attendance of the necessary witnesses can be procured without delaying that work.

Seven of such persons who furnished adulterated milk to cheese factories have settled with the managers and patrons of the several factories, by paying certain damages, and the other two have made offers of settlement which are now under consideration by the factory managers. Two of the farmers sending adulterated milk to dealers in this city have settled with such dealers. Prosecutions have not been commenced, nor are any contemplated against those persons who have made satisfactory arrangements and settled with the aggrieved parties, for the reason that they were detected in each case upon the complaint of those parties who invoked the aid of this department for their own protection, and the guilty parties having acknowledged their guilt and paid the penalty in the way of damages, and have given assurances that in the future they would supply pure milk, we believe the object sought to be accomplished by the dairy department, the stopping of the sale of impure milk, has in these cases, been attained and that no further punishment need be inflicted on

those persons. But should these parties be again detected in supplying adulterated milk, they will be rigorously prosecuted by this department. The remaining farmer, to whom frequent complaints had been made by the dealer in this city, whom he supplied, before we were called upon, and whom we have detected on two different occasions in supplying adulterated milk, has shown no disposition to mend his ways or to treat his patrons fairly, and will be prosecuted at the earliest opportunity.

In the last annual report of Assistant Commissioner Perry, it was stated that the case of *The People v. Henry Schaefer*, who was convicted in the police court of Buffalo of selling adulterated milk, December 30, 1885, was affirmed by the Court of Sessions of Erie county, February 10, 1886, and that the judgment and order of the Court of Sessions was affirmed by the General Term of the Supreme Court in June, 1886, and the proceedings remitted to the Court of Sessions to proceed thereon, and that no further action had yet been taken in the case and no steps taken by the district attorney to carry the judgment into effect.

Nothing has yet been done by the district attorney in this case, and we can only repeat what was said by Assistant Commissioner Perry a year ago, that in cases prosecuted by indictment the district attorney has full control, and no power is vested in this department to hasten his action. We have exhausted all our powers and have used our best endeavors to have this case finally disposed of, but without success. This department has done all it can in this matter, and the responsibility for the failure to execute the law fully does not rest on the Dairy Commission. The sale of oleomargarine in the city of Buffalo has entirely ceased, and we confidently assert that no "imitation butter" can be purchased at any place in this city.

During the past year our two agents in Buffalo have made a large number of inspections of butter, and have taken samples of suspected butter from different dealers, and at hotels and other public places of entertainment. The inspectors have made tests of eighty-seven samples of suspected butter but none of such samples were delivered to the chemist for analysis, as they all proved to be butter, very poor it is true, but the inspectors were

satisfied from their examination that all said eighty-seven samples so taken and thoroughly tested were in fact butter.

Prior to May first, last, there were four persons in this city who sold oleomargarine, and one manufacturer, who manufactured and sold under licenses issued by the United States. When these licenses expired, on the first of last May, none of them were renewed, and during the present year there have been no licenses issued to manufacturers or dealers in oleomargarine by the Internal Revenue Collector, either in Buffalo, or any other county or city in the twenty-eighth Internal Revenue District which includes every county in our jurisdiction.

Our inspectors in Buffalo have made from two to three visits to the public markets of this city, and to the wholesale groceries and commission houses, and also to the different freight houses in search of oleomargarine or imitation butter, but since May first, have been unable to discover any, and have been unable to learn where any was sold or offered for sale, and it has been impossible either for us or our employés to procure any imitation butter since May first, last. Prior to May first Jacob Dold of this city was the only manufacturer of oleomargarine in western New York, and also had a wholesale and two retail stores, selling nearly all the oleomargarine sold in this city. He also stood behind the other persons selling the stuff here, and gave them assurances of ~~protection~~ in case of prosecution. In March 1887, five indictments were found against him for manufacturing and selling oleomargarine made in imitation or semblance of natural butter, and repeated and earnest efforts were made to bring such indictments to trial. He professed a determination to resist the law and to contest the constitutionality of the statute in the courts of the United States. He apparently maintained this determination until about the time of the decision rendered by the Supreme Court of the United States in a case which arose in the State of Pennsylvania involving the constitutionality of the statute of that State relating to the manufacture and sale of imitation butter, and which is practically the same as the statute of this State, by which decision the Pennsylvania statute was declared valid and constitutional, when, on hearing such decision, he immediately ceased to manufacture oleomargarine, took out all his machinery used for that

purpose, and shipped all the stock he had on hand out of this State. He closed his wholesale and retail stores, and did not renew his manufacturers', wholesale dealers' or retail dealers' licenses, and absolutely quit the business. Since May first, last, he has neither manufactured nor sold oleomargarine or any other imitation butter, and we are absolutely confident that none can be purchased here, and that none is used here, at least, in any place of public entertainment. The five indictments are still pending against Dold, and we believe that no good purpose will be served by prosecuting either these indictments or the indictments still pending against John Keho, Anthony W. Voltz, John Berting, Henry Smith, Frederick Brennison and Andrew J. Kurtz. The manufacture and sale of the article has been stopped, and the prosecution of offenders were only intended as a means to accomplish that end, and the object sought having been attained, we believe that the people will be satisfied with the work done and will not demand the punishment of those who formerly dealt in imitation butter. The sale of oleomargarine in this city a year ago was confined to quite narrow limits, as was reported at that time, and it is most gratifying to be able to report the complete cessation of the sale of this most deleterious article. There are, however, large quantities of very poor butter, which has been "renovated," sold here, and which people often mistake for oleomargarine. We do not see, however, how this department can do anything directly to improve the quality of this butter. The only remedy that there seems to be is for the people themselves to refuse to purchase such stuff, as they certainly ought to be able to detect the very inferior quality of the butter about which they have complained to us and of which they have offered us many samples for inspection.

The dairy products now offered for sale in this city show a great improvement in quality over preceeding years. There has, ever since the creation of the Dairy Commission and the commencement of its labors here, been a constant and steady improvement in the quality of dairy products sold here, and we believe that the people have cause to be thankful to the promoters of this department, and to be well satisfied with the efficient work done by its officers.

During the past year the agent of this department at Rochester, Mr. John H. Foley, and the inspector, Mr. Jeremiah Clark, have carried on the work of the inspection of milk in that city upon the same plan pursued by the officers of this department in this city, and have made 1,787 inspections during that time. From the inspections made by them they found it necessary to deliver to Professor S. A. Lattimore, for analysis, seventy-one (71) samples of milk which they thought to be adulterated. Such samples were taken and analyses made during the following named months and the following results obtained :

MONTHS.	Number of samples taken.	Adulterated.	Unadulterated.
1888.			
April	4	1	3
June	12	5	7
July	24	18	6
September.....	31	26	5
Total	71	50	21

It thus appears that the milk supply in Rochester is of exceedingly poor quality and that the sale of adulterated milk there is the rule, and that in the past two or three months the increase in adulteration has been very rapid.

We regret exceedingly to be obliged to report this condition of affairs at Rochester, as in the last annual report of Assistant Commissioner Perry the hope was expressed that it could soon thereafter be reported that the sale of adulterated milk at Rochester, as well as at Buffalo, would be the exception instead of the rule.

This hope was based upon the fact that the prosecutions of offenders at Rochester, although the final termination of those prosecutions was not favorable to this department, for reasons stated at length in that report, had met with popular favor and had the effect of restraining the other milkmen there from adulterating their milk, resulting in a very marked improvement of the quality of the milk supplied by the dealers to the citizens of Rochester. That was the actual condition at that time and continued to be for several months thereafter. Our agents in that

city made daily inspections and careful lactometer and cream gauge tests of numerous samples of milk, during the winter months, and found the milk so tested to be of excellent quality and above the standard. They did not find any milk that, according to the tests made by them, appeared to be of so doubtful quality as to justify them in having it analyzed by the chemists until the month of April last, when, as stated above, four samples were take for analysis. The analyses of these four samples showed that but one was adulterated and that the other three were above the standard. In June, twelve samples of suspected milk were taken to Professor Lattimore for analysis, of which five proved to be adulterated, showing that the adulteration of milk, which was so prevalent the year before, was again very materially increasing. In July a still worse state of affairs was revealed when it appeared that out of twenty-four samples of suspected milk delivered to the chemist for analysis, eighteen, or three-quarters of them, proved to be adulterated. In September, the milkmen evidently thinking their methods were undiscovered, grew bolder, and, of the thirty-one samples of suspected milk taken for analysis, twenty-six proved to be adulterated. Thus the milk supply of Rochester, which for the first six months of this year appeared to be, and in fact was, of good quality, has, during the past three months, become most wretched and as poor as it was before this department made any efforts to improve it. This condition has probably been caused, in part at least, by the unfavorable termination of the cases prosecuted in Rochester a year ago by the reversal of the judgment of conviction of the police court by the Court of Sessions of Monroe county. The defendants in those cases escaped punishment, and while the fact that the dairy department had commenced prosecutions, served to deter others from violating the law for a considerable period, when they found that no further prosecutions were commenced after the conclusion of those cases, they, perhaps, concluded that our efforts had proven futile, and that we had abandoned all hope of convicting persons charged with the violation of the dairy laws in Rochester. We, on the other hand, were led to believe, from the reports of the employés of this department, of their inspection of the milk supply there prior to the month of June, that the adul-

teration of milk at Rochester had practically ceased, and that it was, therefore, unnecessary to institute further prosecutions against those who had been detected in violation of the dairy laws during the preceeding year. When, however, it was brought to our knowledge, by the reports of analyses made by Professor Lattimore in the latter part of June last, that adulteration of milk was being again extensively practised, we were about commencing the very extensive and important work of inspecting every cheese factory in the fourteen counties of the State under our supervision, which work had occupied the time of all the employés under our charge and has, also, required the services of extra employés in order to complete the work during the cheese season, and we consequently have not had the time at our disposal to give that attention to the prosecution of the persons practising such adulteration, that is required. We, however, having now completed the cheese factory inspection, shall soon have the opportunity to commence such prosecutions against offenders at Rochester as may be required, and shall use every endeavor to permanently, this time, put an end to the wholesale adulteration of milk at that place. It seems that only the practical lesson of conviction, will have the proper effect, and we shall try to enforce this lesson in such a manner at Rochester that it will not soon be forgotten by those who persist in selling adulterated and unwholesome milk. We can, however, report that at Rochester the sale of oleomargarine or any other kind of imitation butter has been entirely suppressed. During the latter part of the year 1886 and the first three months of 1887, very large quantities of oleomargarine were sold in Rochester, but the sale was entirely stopped through the efforts of this department after April 1, 1887, without prosecuting any of the persons guilty of selling or supplying the same to their customers and guests as stated in the last annual report of Assistant Commissioner Perry, except in one instance. On October 12, 1887, it was discovered that one Samuel Brewer, keeper of a hotel at No. 8 Front street, in Rochester, was serving oleomargarine to his guests. A sample of the same was obtained and delivered to Professor Lattimore for analysis, and he pronounced the same to be oleomargarine or butterine. Brewer immediately thereafter

ceased its use, and since that date we have been unable to discover any oleomargarine for sale or in use at any place in Rochester. The inspectors there have been very vigilant in their efforts since that time to ascertain whether any oleomargarine was being sold at or being sent to Rochester, but have been unable to find any. Several complaints were made to them by parties who suspected that oleomargarine had been sold to them, and during the month of February last several samples of the suspected butter were delivered to Professor Lattimore for analysis, all of which proved to be genuine butter. In December last four samples, suspected of being oleomargarine, were delivered to him, in April four samples were delivered to him, and in June one sample was delivered to him, all taken at Rochester, all of which upon being analyzed proved to be genuine butter.

In August and September of this year it was claimed by the Rochester newspapers that oleomargarine was again being sold in Rochester, and we commenced a systematic investigation to ascertain if it was true. Thinking that, perhaps, the regular inspectors of this department, who had become well known to the grocers and other dealers in dairy products in Rochester, might, on that account, not be able to discover the presence of this article in that city, we secured the services of a private detective, who was not known to be in the employ of this department, to detect, if possible, any person guilty of selling oleomargarine or using it at any public hotel, restaurant or boarding-house. He possessed special facilities for doing this work, on account of his other professional associations, and made a careful search for oleomargarine at all the groceries and commission houses, and at the railroad freight depots and express offices, to all of which he had free and unobstructed access, and his report to us, just prior to October first, was that he had been unable to discover a single violation of the law in the sale or use of oleomargarine in the city of Rochester. As a special inducement to him to perform his work with great thoroughness, we offered him a reward of \$100 for every sample that he could obtain of oleomargarine or any other imitation of butter offered for sale or used at any public place of entertainment for guests in the city of Rochester. We are satisfied that his report is correct,

and that, during the past year, or since October 12, 1887, there has been no oleomargarine used in that city.

Our regular butter and cheese expert at Rochester, Mr. Leander W. Cooley, has been engaged in the wholesale dealing of butter and cheese at Rochester for several years, and is well acquainted with all the dealers in butter and cheese in said city of Rochester. He has kept vigilant watch over all such dealers, and has often reported to us, during the past year, that he was unable to find any spurious or imitation butter or cheese in the city of Rochester or in the towns adjoining.

The work performed by us and the experts and agents of the dairy department in the county of Cattaraugus, during the past year, has consisted chiefly of visiting the cheese factories situated in the several towns of that county, and in making inspections of the milk delivered by the patrons of such factories to be manufactured into cheese. This work was necessitated entirely by the frequent and persistent complaints made to us by the proprietors and patrons of such cheese factories, or by the cheese-makers employed therein, of the poor quality of the milk brought by a portion of their patrons; they earnestly requested us to take such samples as we might find, upon inspection and examination, to be of doubtful quality, and cause them to be properly analyzed so that if they were right in their suspicions, that the suspected patrons were supplying adulterated milk to such factories, such persons could be punished, and the further supplying of adulterated milk by them be prevented.

During the month of October, 1887, nine (9) samples of milk, suspected of being adulterated, were taken at such factories by the employés of this department, pursuant to directions, and were delivered to one of the analytical chemists, employed by us, for analysis. He made careful analyses of all such samples, and reported to us that he found every one of such samples to be adulterated.

During the months of March and April, 1888, eight samples of milk, thought to be impure, were taken from milk peddlers in the village of Olean, in said county of Cattaraugus, by John Wiley, the expert in the employ of this department at that place, upon complaints made to him by several of the citizens of Olean, of the

inferior quality of the milk supplied to them. All these eight samples so taken were delivered by Mr. Wiley to our chemist at Olean, and he made analysis of each of such samples and reported to us that the results showed that all of the eight samples of milk were pure and unadulterated.

When the reports of the analyses of these eight samples of milk were submitted to Assistant Commissioner Perry, he immediately gave directions to all of the experts in the employ of this department in the various cities and towns in the several counties under our supervision, not to deliver any more samples of milk to the chemists for analysis, taken upon the complaints of citizens of such cities and towns; but when such complaints were made to them, to take samples, they should procure such samples of the parties against whom complaints were made and make tests thereof with the lactometer and cream gauge, and if they were satisfied from their own tests that such milk was adulterated, to then take samples and deliver them to the chemist for purposes of analysis. This course was deemed necessary for the reason that samples taken upon complaints of citizens, had, upon being analyzed, proven to be unadulterated, and the analyses thereof had entailed considerable expense, which expense he believed should not be unnecessarily incurred.

Assistant Commissioner P. J. Sutley, was immediately advised of the action taken by Mr. Perry, and he fully concurred therein and approved the same. During the month of June, 1888, twenty samples of milk, supposed to be adulterated, were taken by our Mr. Wiley, upon complaints made to him from cheese factories in said county of Cattaraugus, which were delivered by him to our chemist at Olean for chemical analysis, and out of such samples, nine proved, upon being analyzed, to be adulterated.

In the month of July last, twenty-two (22) samples of suspected milk were taken from different cheese factories in said county of Cattaraugus and delivered by him to the chemist at Olean for analysis. All of these samples were taken by our officers at the urgent solicitations of the cheese factory managers or patrons. The result of the analyses of these samples by the chemist showed that thirteen (13) of the same were impure and adulterated.

The month of August last proved to be unusually prolific of complaints from the citizens of the different towns and villages, as well as from cheese factory proprietors, managers, patrons and cheese-makers, of the suspicious quality of the milk supplied to them. These complaints were very numerous and the complainants very urgent in their requests and in some instances demands for assistance from this department to protect them from the gross frauds alleged to be practiced upon them by those furnishing such milk.

Our inspectors during that month gathered twenty-eight (28) samples of the milk claimed to be impure from the various cheese factories where complaints had been made and delivered them to the chemists for analysis. The results of their analyses showed that but six of the samples of alleged impure milk, about which such bitter complaints had been made, were adulterated.

Previous to the time of receiving the certificates of analysis of the last above-mentioned samples of milk, taken from cheese factories upon complaints made to us or our inspectors, as above stated, we had advised the inspectors to take samples of all milk at cheese factories, which the proprietors, patrons or cheese-makers claimed that they believed it to be adulterated and of which they requested the inspectors to take samples for chemical analysis.

Immediately upon hearing the results of the analyses of the samples of the milk taken upon such complaints from cheese factories during the month of August last, as above stated, we gave to all the experts and agents of this department, under our charge, implicit orders not to take any more samples of milk for analysis upon complaints made to them by any persons, unless they (the inspectors) should feel satisfied themselves, after making careful tests, with the lactometer and cream gauge, of samples of the milk complained of, that the same were adulterated, and to exercise great care in taking such samples for analysis, so that the chemists would not be required, at large expense to the state, to analyze milk that was not adulterated. During the month of September our officers gathered twenty-six (26) samples of milk suspected of being adulterated at cheese factories, upon complaints made to them by interested parties,

notwithstanding our directions not to do so, and delivered the same to the chemist at Olean for analysis. The chemist analyzed such samples and reported to us that he found that seventeen of the same were impure and adulterated. When we were apprised of the results of the analysis of the milk taken at cheese factories in September, upon the complaints of the managers or patrons, notwithstanding that two-thirds of the samples taken had proved to be adulterated, we called upon our experts and agents, who had taken such samples of suspected milk, for an explanation of the reasons why they had taken samples of milk, which proved to be good, in violation of their orders not to do so. They reported that the reasons why they had taken such samples that in all the cases the milk had been tested by the authorities of the several cheese factories at which such samples had been taken, and that, according to such tests, made with the lactometer and cream gauge, it was insisted by the cheese factory authorities that such milk was adulterated, and of sufficiently suspicious quality to justify the inspectors in taking samples thereof for analysis, and insisted that the same should be so taken, as they had long suspected the parties, who delivered such milk, to be guilty of supplying adulterated milk. Our inspectors said that they were so strongly importuned by parties, who felt aggrieved, to take such samples that they did take the same, several of which they did not think were adulterated, but to satisfy the complainants who were very confident that they were being wronged, and were very anxious that the milk should be analyzed.

We have been advised from time to time during the cheese season that several of the offending parties, who has supplied adulterated milk to cheese factories as hereinbefore stated, upon being charged by the managers or proprietors with the offense, have confessed their guilt and offered to settle with the patrons of such factories and to pay them such damages as had been sustained through their unlawful acts. We have been advised that in quite a number of instances the patrons have settled with the offenders who have paid various sums, about equal, as we understand, to the amount of the penalty fixed by the statute.

We have not, as yet, instituted any prosecutions against the above-named offenders, but there are some of them who should

be prosecuted and we shall, as soon as the time will permit, endeavor to secure their conviction.

During the month of January last, Inspector John Wiley, of Olean, took six samples of suspected butter at the hotels and restaurants in that village and delivered them to Dr. Sage, our chemist, for analysis, two of which proved to be oleomargarine. During the month of February he also took six samples of suspected butter from such hotels and restaurants, all of which, upon being analyzed by Dr. Sage, proved to be adulterated. In the month of March he also took one sample of butter supposed to be spurious, but which the chemical analysis made by Dr. Sage showed to be pure butter.

We have been unable to discover during the past year that any oleomargarine or other imitation butter has been sold at Olean. The inspector there has made diligent search from time to time during the year, at all the places where dairy products were sold at Olean, for oleomargarine or other imitation butter, but not in a single instance has he been able to discover that any dealer there has bought or sold any, or received any through any of the freight or express offices which he has carefully watched.

The only oleomargarine he did find, as above stated, was at the hotels and restaurants, the proprietors of which had purchased it elsewhere, probably at Buffalo, and had brought it secretly into Olean for use at their respective places of entertainment. But since February last he has been unable to discover that any oleomargarine has been purchased or used at any such hotel or restaurant and we sincerely believe that since that time no oleomargarine or other imitation butter has been sold or used in that village.

In the last annual report of Assistant Commissioner Sutley a detailed account was given of the prosecution instituted by him against one Robert Stuart for delivering adulterated milk to the Campbell Hill cheese factory, in the town of Pike, Wyoming county, and of the unfavorable termination of the trial of that case, and he stated that he would, in the near future, commence another prosecution against Joseph Stuart, who it transpired, on the trial of Robert Stuart, was the real party who furnished the milk.

In the month of May last, Mr. Sutley went before the grand jury of Wyoming county, for the purpose of having the said

Joseph Stuart indicted for such offense. He also had Professor Vandenburg, who made the analysis of the milk, and Francis Murphy and Edward Wolcott, who were present when Mr. Sutley took the sample of milk which proved to be adulterated. Mr. Sutley, Professor Vandenburg and Mr. Murphy, sworn by the grand jury, who, at the conclusion of their testimony, expressed the opinion that the testimony given was sufficient. Mr. Sutley was informed, on the evening of the same day, by the district attorney of Wyoming county that the grand jury had found a bill of indictment against Joseph Stuart. Mr. Sutley subsequently learned that the next day the grand jury reconsidered their action of the previous day, and permitted the defendant to give testimony before them and then found no indictment. He learned that word had been sent to Stuart and his friends of the action of the grand jury in his case, and they appeared in force the next day. It would seem that the grand jury assumed the functions of a trial jury and acquitted the defendant. Stuart should have been indicted. The case against him was conclusive, and it seems quite remarkable that a grand jury should have so reversed their action in a very few hours.

The patrons of the Campbell Hill cheese factory were very much chagrined at the result and were very indignant. No subsequent effort has been made to secure Stuart's indictment, as it seemed quite impossible to do so, but perhaps it may be considered advisable at some future time to again make the attempt. It was long a source of complaint, that his milk furnished to that factory was of a very poor quality, and the other patrons desired very much to see him prosecuted for his alleged violations of the law and of their rights.

The results of the convictions had in the county of Wyoming last year, have, however, been very beneficial to the dairy interests of that county. Not nearly so many complaints have been made to us by cheese factory owners and managers as there were last year.

Some complaints have been made to us, and we have caused our inspectors to visit such factories from which complaints were made, and to make inspections of the milk delivered there to be manufactured into cheese. The other factories in the county have also been visited by the inspectors and tests made of the milk delivered at them, and they found it necessary to take from such

factories in that county but one sample of milk for analysis, which they thought from their inspection was adulterated. This sample was delivered to the chemist for analysis and proved to be adulterated.

This sample was taken at the Excelsior Factory, No. 1, at Darien in said county. We have been advised by the directors of said factory that the person furnishing such adulterated milk had, upon being charged with it, confessed his guilt, and had settled with the patrons of the factory, by paying them the damages sustained by them.

The dairy interests of Wyoming county are in a healthy and very satisfactory condition, and fewer complaints are made to us by the citizens of that county than of any other county under our supervision.

Those most interested in the workings of the dairy department, are well satisfied with the results accomplished there and give to this department the credit of improving the general quality of the milk supplied throughout that county to cheese factories and consumed in the towns and villages of the county. Early in the month of July last (1888), in pursuance of instructions theretofore received from you, we, together with all the employés of this department under our supervision, commenced a thorough and systematic inspection of all the cheese and butter factories in the counties of Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Steuben, Wayne, Wyoming and Yates, being all of the counties under our joint jurisdiction.

This work occupied a considerable period of time, and resulted in the inspection of 463 butter and cheese factories, of which we herewith submit a detailed list, giving the name of each and the place of its location :

Wilson Cheese Factory.....	Wilson, Niagara Co., N. Y.
Ransomville Creamery Company..	Ransomville, Niagara Co., N. Y.
Tuttle Cheese Factory.....	Holley, Orleans Co., N. Y.
Knowlesville Creamery.....	Knowlesville, Orleans Co., N. Y.
Swiss Cheese Factory.....	Darien, Genesee Co., N. Y.
P. Warner, Swiss Cheese Factory....	Darien, Genesee Co., N. Y.
Cold Spring Creamery.....	North Bergen, Genesee Co., N. Y.

Cloverfield Creamery.....	Fargo, Genesee Co., N. Y.
Byron Cheese Factory.....	Byron, Genesee Co., N. Y.
North Star Cheese Factory.....	Alexander, Genesee Co., N. Y.
Excelsior Cheese Factory, No. 2.....	Sawens, Genesee Co., N. Y.
Excelsior Cheese Factory, No. 1.....	Darien, Genesee Co., N. Y.
Excelsior Cheese Factory, No. 8..	East Pembroke, Genesee Co., N. Y.
Alexander Cheese Factory.....	Alexander, Genesee Co., N. Y.
Henry Seidel Cheese Factory.....	Potter, Yates Co., N. Y.
Kenny Farm Cheese Factory.....	Potter, Yates Co., N. Y.
The Naples Cheese Factory	Naples, Ontario Co., N. Y.
Stanley Creamery	Seneca, Ontario Co., N. Y.
Victor Creamery.....	Victor, Ontario Co., N. Y.
Sanitarium Creamery.....	Manchester, Ontario Co., N. Y.
Crystal Spring Creamery.....	Port Gibson, Ontario Co., N. Y.
Sodus Creamery	Sodus, Wayne Co., N. Y.
Montana Cheese Factory.....	Butler, Wayne Co., N. Y.
Lincoln Cheese Factory.....	Walworth, Wayne Co., N. Y.
Macedon Cheese Association.....	Macedon, Wayne Co., N. Y.
Mendon Cheese Factory	Mendon, Monroe Co., N. Y.
Genesee Valley Creamery	Scottsville, Monroe Co., N. Y.
Climax Creamery.....	Ellery, Chautauqua, Co., N. Y.
Tompkins Cheese Factory.....	Gerry, Chautauqua Co., N. Y.
Maple Grove Cheese Factory.....	Gerry, Chautauqua Co., N. Y.
Star Creamery	Gerry, Chautauqua Co., N. Y.
Warner Cheese Factory.....	Gerry, Chautauqua Co., N. Y.
Chautauqua Bluff Creamery.....	Gerry, Chautauqua Co., N. Y.
Tompkins Creamery.....	Gerry, Chautauqua Co., N. Y.
Gerry Creamery.....	Gerry, Chautauqua Co., N. Y.
Deed Spring Creamery.....	Chautauqua, Chautauqua Co., N. Y.
Mayville Cheese Factory....	Chautauqua, Chautauqua Co., N. Y.
Willow Dale Creamery.....	Westfield, Chautauqua Co., N. Y.
French Creek Cheese Factory.....	French Creek, Chautauqua Co., N. Y.
Rundel's Creamery.....	Mina, Chautauqua Co., N. Y.
Morgan's Corners Cheese Factory....	French Creek, Chautauqua Co., N. Y.
Case Cheese Factory	French Creek, Chautauqua Co., N. Y.
Findley's Lake Cheese Factory.....	Mina, Chautauqua Co., N. Y.

Sheldon Corners Cheese Factory..	Ripley, Chautauqua Co., N. Y.
Marks' Creamery.....	Mina, Chautauqua Co., N. Y.
Clymer Prize Creamery.....	Clymer, Chautauqua Co., N. Y.
Equity Creamery	Sherman, Chautauqua Co., N. Y.
Clear Creek Cheese Factory	Ellington, Chautauqua Co., N. Y.
Ellington Cheese Factory No. 2..	Ellington, Chautauqua Co., N. Y.
Ellington Cheese Factory No. 1..	Ellington, Chautauqua Co., N. Y.
Lavant Creamery	Ellicott, Chautauqua Co., N. Y.
Still Water Creamery.....	Kiantone, Chautauqua Co., N. Y.
Palmer Spring Creamery	Busti, Chautauqua Co., N. Y.
Watts' Flats Cheese Factory....	Harmony, Chautauqua Co., N. Y.
Boomertown Cheese Factory.....	Busti, Chautauqua Co., N. Y.
Clover Creamery.....	Busti, Chautauqua Co., N. Y.
Kiantone Valley Creamery.....	Kiantone, Chautauqua Co., N. Y.
Southern Chautauqua Cheese Factory.....	Carroll, Chautauqua Co., N. Y.
Fenton Creamery	Carroll, Chautauqua Co., N. Y.
Carroll Cold Spring Creamery....	Carroll, Chautauqua Co., N. Y.
Riverside Creamery,	Poland, Chautauqua Co., N. Y.
Reliance Cheese Factory.....	Poland, Chautauqua Co., N. Y.
Cold Water Creamery	Poland, Chautauqua Co., N. Y.
Ellington No. 3, Cheese Factory,	Ellington, Chautauqua Co., N. Y.
Ellington No. 4, Cheese Factory,	Kennedy, Chautauqua Co., N. Y.
Summerdale Cheese Factory,	Chautauqua, Chautauqua Co., N. Y.
Chautauqua Lake Creamery,	Chautauqua, Chautauqua Co., N. Y.
Panama Creamery.....	Panama, Chautauqua Co., N. Y.
Open Meadows Creamery.....	Harmony, Chautauqua Co., N. Y.
Wall Street Cheese Factory....	Harmony, Chautauqua Co., N. Y.
Cook Cheese Factory.....	Harmony, Chautauqua Co., N. Y.
Goshen Cheese Factory	Harmony, Chautauqua Co., N. Y.
Town Line Cheese Factory.....	Clymer, Chautauqua Co., N. Y.
Hubbard's Corners Cheese Factory.....	Sherman, Chautauqua Co., N. Y.
South Sherman Cheese Factory,	Sherman, Chautauqua Co., N. Y.
Toney Cheese Factory.....	Charlotte, Chautauqua Co., N. Y.
Rood Cheese Factory.....	Charlotte, Chautauqua Co., N. Y.
Charlotte Centre Cheese Factory,	Charlotte, Chautauqua Co., N. Y.
Charlotte Union Cheese Factory,	Charlotte, Chautauqua Co., N. Y.

Sinclairville Cheese Factory, Sinclairville, Chautauqua Co., N. Y.	
Canadawa Cheese Factory Arkwright, Chautauqua Co., N. Y.	
Arkwright Union Cheese Factory Arkwright, Chautauqua Co., N. Y.	
Moons Station Cheese Factory . . Stockton, Chautauqua Co., N. Y.	
Casadaga Creamery Stockton, Chautauqua Co., N. Y.	
South Pomfret Creamery Pomfret, Chautauqua Co., N. Y.	
Stockton Cheese Factory Stockton, Chautauqua Co., N. Y.	
Cooper & Derby Creamery Stockton, Chautauqua Co., N. Y.	
Lewis Cheese Factory Stockton, Chautauqua Co., N. Y.	
Bear Creek Creamery Stockton, Chautauqua Co., N. Y.	
DeWittville Cheese Factory . . Chautauqua, Chautauqua Co., N. Y.	
Waterman Cheese Factory Ellery, Chautauqua Co., N. Y.	
Pleasantville Cheese Factory, Chautauqua, Chautauqua Co., N. Y.	
Alden Cheese Factory Ellery, Chautauqua Co., N. Y.	
Red Bird Cheese Factory Ellery, Chautauqua Co., N. Y.	
South Stockton Cheese Factory, Stockton, Chautauqua Co., N. Y.	
West Ellery Cheese Factory Ellery, Chautauqua Co., N. Y.	
Bemis Point Cheese Factory Ellery, Chautauqua Co., N. Y.	
Ellery Creamery Ellery, Chautauqua Co., N. Y.	
Ferrier Cheese Factory Ellery, Chautauqua Co., N. Y.	
Linwood Cheese Factory, No. 2 Cherry Creek, Chautauqua Co., N. Y.	
Linwood Cheese Factory, No. 3 Cherry Creek, Chautauqua Co., N. Y.	
Linwood Cheese Factory, No. 1 Cherry Creek, Chautauqua Co., N. Y.	
Beardsley Cheese Factory Villanova, Chautauqua Co., N. Y.	
Wright's Corners Cheese Factory Villanova, Chautauqua Co., N. Y.	
Maple Hill Creamery Villanova, Chautauqua Co., N. Y.	
White Clover Cheese Factory . . Arkwright, Chautauqua Co., N. Y.	
Kent Street Cheese Factory . . Cherry Creek, Chautauqua Co., N. Y.	
Arkwright Centre Cheese Factory Arkwright, Chautauqua Co., N. Y.	
Arkwright Valley Cheese Factory Arkwright, Chautauqua Co., N. Y.	
Laona Cheese Factory Pomfret, Chautauqua Co., N. Y.	

Cordova Cheese Factory	Pomfret, Chautauqua Co., N. Y.
White Clover Cheese Factory, No. 1	Hanover, Chautauqua Co., N. Y.
White Clover Cheese Factory, No. 2	Sheriden, Chautauqua Co., N. Y.
White Clover Cheese Factory, No. 3	Hanover, Chautauqua Co., N. Y.
White Clover Cheese Factory, No. 4	Hanover, Chautauqua Co., N. Y.
White Clover Cheese Factory, No. 8	Villanovia, Chautauqua Co., N. Y.
Sherman Creamery	Sherman, Chautauqua Co., N. Y.
Smith's Mills Cheese Factory	Hanover, Chautauqua Co., N. Y.
Hanover Centre Cheese Factory	Hanover, Chautauqua Co., N. Y.
Nashville Cheese Factory	Hanover, Chautauqua Co., N. Y.
County Line Cheese Factory	Hume, Allegany Co., N. Y.
Mills Cheese Factory	Hume, Allegany Co., N. Y.
Stone Spring Cheese Factory	Hume, Allegany Co., N. Y.
South Eagle Cheese Factory	Centreville, Allegany Co., N. Y.
Centerville Cheese Factory	Centreville, Allegany Co., N. Y.
East Centreville Cheese Factory	Centreville, Allegany Co., N. Y.
Star Cheese Factory	Centreville, Allegany Co., N. Y.
Babbitt Cheese Factory	Hume, Allegany Co., N. Y.
Hardy Cheese Factory	Rushford, Allegany Co., N. Y.
Rush Creek Cheese Factory	Hume, Allegany Co., N. Y.
Fillmore Comb., No. 2	Hume, Allegany Co., N. Y.
Fillmore Comb., No. 1	Hume, Allegany Co., N. Y.
Rushford Cheese Factory	Rushford, Allegany Co., N. Y.
Pearl Creek Cheese Factory	New Hudson, Allegany Co., N. Y.
Mt. Monroe Cheese Factory	New Hudson, Allegany Co., N. Y.
West Branch Cheese Factory	Rushford, Allegany Co., N. Y.
Kellogg's Cheese Factory	Rushford, Allegany Co., N. Y.
Podunk Cheese Factory	Rushford, Allegany Co., N. Y.
Brookside Cheese Factory	Rushford, Allegany Co., N. Y.
Grove Cheese Factory	Grove, Allegany Co., N. Y.
E. Granger Cheese Factory	Granger, Allegany Co., N. Y.
Birdsall Cheese Factory	Birdsall, Allegany Co., N. Y.
Empire Cheese Factory	Allen, Allegany Co., N. Y.

Short Track Cheese Factory	Granger, Allegany Co., N. Y.
West Hill Cheese Factory	Allen, Allegany Co., N. Y.
Caneadea Cheese Factory	Caneadea, Allegany Co., N. Y.
Ormal Cheese Factory	Caneadea, Allegany Co., N. Y.
Shongo Cheese Factory	Caneadea, Allegany Co., N. Y.
Houghton Cheese Factory	Caneadea, Allegany Co., N. Y.
Allen Cheese Factory	Allen, Allegany Co., N. Y.
Angelica Union Cheese Factory	Angelica, Allegany Co., N. Y.
Transit Bridge Cheese Factory	Belfast, Allegany Co., N. Y.
Keystone Cheese Factory	Allen, Allegany Co., N. Y.
Angelica Cheese Factory	Angelica, Allegany Co., N. Y.
Caseville Cheese Factory	Belfast, Allegany Co., N. Y.
Fargo Cheese Factory	New Hudson, Allegany Co., N. Y.
Black Creek Cheese Factory	New Hudson, Allegany Co., N. Y.
Sand Cheese Factory	New Hudson, Allegany Co., N. Y.
Hudson Centre Cheese Factory	New Hudson, Allegany Co., N. Y.
Marshall Cheese Factory	New Hudson, Allegany Co., N. Y.
Belfast Cheese Factory	Belfast, Allegany Co., N. Y.
Able Baker Cheese Factory	West Almond, Allegany Co., N. Y.
White Creek Cheese Factory	Belfast, Allegany Co., N. Y.
Phillips Creek Cheese Factory	Ward, Allegany Co., N. Y.
Belmont Cheese Factory	Amity, Allegany Co., N. Y.
Nile Cheese Factory	Friendship, Allegany Co., N. Y.
Sherman Cheese Factory	Ward, Allegany Co., N. Y.
A. E. Hall Cheese Factory	Ward, Allegany Co., N. Y.
Five Corners Cheese Factory	Alfred, Allegany Co., N. Y.
East Hill Cheese Factory	Friendship, Allegany Co., N. Y.
North Cuba Cheese Factory	Cuba, Allegany Co., N. Y.
Amsden Cheese Factory	Friendship, Allegany Co., N. Y.
South Cuba Cheese Factory	Cuba, Allegany Co., N. Y.
Cuba Valley Cheese Factory	Cuba, Allegany Co., N. Y.
Keller Hill Cheese Factory	Cuba, Allegany Co., N. Y.
Laferty Cheese Factory	New Hudson, Allegany Co., N. Y.
Karr Cheese Factory	Almond, Allegany Co., N. Y.
West Almond Cheese Factory	West Almond, Allegany Co., N. Y.
Almond Cheese Factory	Almond, Allegany Co., N. Y.
Rice Cheese Factory	Cuba, Allegany Co., N. Y.
Forest Cheese Factory	Clarksville, Allegany Co., N. Y.

West Clarksville Cheese Factory..	Clarksville, Allegany Co., N. Y.
Spring Mills Cheese Factory...	Independence, Allegany Co., N. Y.
Wild Man Cheese Factory.....	Independence, Allegany Co., N. Y.
D. M. Clark's Cheese Factory..	Independence, Allegany Co., N. Y.
Cryder Creek Cheese Factory..	Independence, Allegany Co., N. Y.
Halls Port Cheese Factory.....	Willing, Allegany Co., N. Y.
Andover Cheese Factory.....	Andover, Allegany Co., N. Y.
Richburgh Cheese Factory.....	Amity, Allegany Co., N. Y.
Scio Cheese Factory, No. 1.....	Scio, Allegany Co., N. Y.
Smith's Boliver Cheese Factory.....	Boliver, Allegany Co., N. Y.
Allentown Cheese Factory.....	Scio, Allegany Co., N. Y.
Elm Valley Cheese Factory.....	Andover, Allegany Co., N. Y.
East Valley Cheese Factory	Alfred, Allegany Co., N. Y.
Pleasant Valley Cheese Factory.....	Alfred, Allegany Co., N. Y.
Vandermark Cheese Factory.....	Ward, Allegany Co., N. Y.
Cottrell Cheese Factory.....	Alfred, Allegany Co., N. Y.
Collins Cheese Factory	Alfred, Allegany Co., N. Y.
Tappin Brook Cheese Factory.....	Wellsville, Allegany Co., N. Y.
Little Genesee Cheese Factory.....	Genesee, Allegany Co., N. Y.
Boliver Cheese Factory.....	Boliver, Allegany Co., N. Y.
Genesee Valley Cheese Factory....	Belvidere, Allegany Co., N. Y.
Friendship Cheese Factory.....	Friendship, Allegany Co., N. Y.
Hume Cheese Factory.....	Hume, Allegany Co., N. Y.
McHenry Valley Cheese Factory....	Almond, Allegany Co., N. Y.
Beaver Meadow Cheese Factory.....	Ellicottville, Cattaraugus Co., N. Y.
Vinton Stand Cheese Factory.....	Ellicottville, Cattaraugus Co., N. Y.
Yorkshire Cheese Factory.....	Yorkshire, Cattaraugus Co., N. Y.
Otto Union Cheese Factory, No. 1...	Otto, Cattaraugus Co., N. Y.
Sandusky Cheese Factory, No. 3.....	Freedman, Cattaraugus Co., N. Y.
Haskal Flats Cheese Factory....	Hinsdale, Cattaraugus Co., N. Y.
Lower Haskal Cheese Factory...	Portville, Cattaraugus Co., N. Y.
Hopkins Cheese Factory.....	Portville, Cattaraugus Co., N. Y.
Mill Grove Cheese Factory.....	Portville, Cattaraugus Co., N. Y.
Scotts Corners Cheese Factory..	Hinsdale, Cattaraugus Co., N. Y.
Hinsdale Cheese Factory.....	Hinsdale, Cattaraugus Co., N. Y.

Allegany Union Cheese Factory,	Allegany, Cattaraugus Co., N. Y.
Four Mile Union Cheese Factory,	Allegany, Cattaraugus Co., N. Y.
Sheldon's Allegany Cheese Factory	Allegany, Cattaraugus Co., N. Y.
Wilson Cheese Factory	Ischua, Cattaraugus Co., N. Y.
Franklinville Cheese Factory,	Franklinville, Cattaraugus Co., N. Y.
Lynden Cheese Factory	Lynden, Cattaraugus Co., N. Y.
Franklinville Combination No. 7	Humphrey, Cattaraugus Co., N. Y.
Franklinville Combination No. 8 . .	Ischua, Cattaraugus Co., N. Y.
Sandusky, No. 12, Cheese Factory	Great Valley, Cattaraugus Co., N. Y.
Somerville Cheese Factory . .	Great Valley, Cattaraugus Co., N. Y.
Great Valley Cheese Factory,	Great Valley, Cattaraugus Co., N. Y.
Franklinville Combination, No. 6	Humphrey, Cattaraugus Co., N. Y.
South Napoli Cheese Factory	South Napoli, Cattaraugus Co., N. Y.
Sibley Cheese Factory	South Napoli, Cattaraugus Co., N. Y.
Narrows Cheese Factory	Napoli, Cattaraugus Co., N. Y.
Spring Valley Cheese Factory	Napoli, Cattaraugus Co., N. Y.
Little Valley Centre Cheese Factory	Little Valley Centre, Cattaraugus Co., N. Y.
Mack Cheese Factory	Little Valley, Cattaraugus Co., N. Y.
Little Valley Cheese Factory,	Little Valley, Cattaraugus Co., N. Y.
Brooks' Cheese Factory	Little Valley, Cattaraugus Co., N. Y.
Bucktooth Cheese Factory	Salamanca, Cattaraugus Co., N. Y.
Sandusky Cheese Factory	Humphrey, Cattaraugus Co., N. Y.
Franklinville Combination, No. 4	Humphrey, Cattaraugus Co., N. Y.
Randolph Combination, No. 1 . .	Cold Spring, Cattaraugus Co. N. Y.
Randolph Combination, No. 3 . .	Randolph, Cattaraugus Co., N. Y.
Randolph Combination, No. 2 . .	Randolph, Cattaraugus Co., N. Y.
Sample Hill Cheese Factory . . .	Randolph, Cattaraugus Co., N. Y.
Randolph Combination, No. 4 . . .	Rutledge, Cattaraugus Co., N. Y.
Axville Cheese Factory	Conewango, Cattaraugus Co., N. Y.
Elm Creek Creamery	Conewango, Cattaraugus Co., N. Y.
Highland Cheese Factory	Conewango, Cattaraugus Co., N. Y.

- Randolph Combination, No. 5, Conewango, Cattaraugus Co., N. Y.
 Wm. M. Brown Creamery . . . Cold Spring, Cattaraugus Co., N. Y.
 Fair View Cheese Factory Freedom, Cattaraugus Co., N. Y.
 Sheldon's Home Cheese Factory . . Ischua, Cattaraugus Co., N. Y.
 Ellicottsville Cheese Factory, No. 18 . . Ellicottsville, Cattaraugus
 Co., N. Y.
 Lime Brook Cheese Factory, No. 4 Mansfield, Cattaraugus
 Co., N. Y.
 Mansfield Cheese Factory Mansfield, Cattaraugus Co., N. Y.
 Bellas Cheese Factory Ashford, Cattaraugus Co., N. Y.
 Mansfield Cheese Factory, No. 2, Mansfield, Cattaraugus Co., N. Y.
 State Line Cheese Factory . . Farmersville, Cattaraugus Co., N. Y.
 East Otto Cheese Factory No. 5, East Otto, Cattaraugus Co., N. Y.
 Mansfield Cheese Factory No. 1, Mansfield, Cattaraugus Co., N. Y.
 Lime Brook Cheese Factory No. 1 . . . Otto, Cattaraugus Co., N. Y.
 Farmersville Cheese Factory No 2 . . . Farmersville, Cattaraugus
 Co., N. Y.
 White School-house, Cheese Factory Machias, Cattaraugus
 Co., N. Y.
 Franktown Cheese Factory No. 6 . . Ashford, Cattaraugus Co., N. Y.
 Farmersville Cheese Factory, Farmersville, Cattaraugus Co., N. Y.
 Bellas Cheese Factory Machias, Cattaraugus Co., N. Y.
 Plato Union Cheese Factory . . . East Otto, Cattaraugus Co., N. Y.
 East Otto Cheese Factory No. 2, East Otto, Cattaraugus Co., N. Y.
 The Fry Cheese Factory East Otto, Cattaraugus Co., N. Y.
 East Otto Cheese Factory No. 1, East Otto, Cattaraugus Co., N. Y.
 Brooklyn Cheese Factory No. 4, East Otto, Cattaraugus Co., N. Y.
 Eagle Cheese Factory No. 3 . . . East Otto, Cattaraugus Co., N. Y.
 The Block Cheese Factory No. 12, Ashford, Cattaraugus Co., N. Y.
 Sandusky Cheese Factory No. 9 Farmersville, Cattaraugus
 Co., N. Y.
 Yorkshire Centre Cheese Factory Yorkshire, Cattaraugus
 Co., N. Y.
 Markham's Cheese Factory Dayton, Cattaraugus Co., N. Y.
 Springville Cheese Factory No. 4, Ashford, Cattaraugus Co., N. Y.
 Franklinville Cheese Factory No. 11 Lynden, Cattaraugus
 Co., N. Y.
 Studley's Cheese Factory Ashford, Cattaraugus Co., N. Y.

The Leon Cheese Factory	Leon, Cattaraugus Co., N. Y.
The Freedom Cheese Factory . . .	Freedom, Cattaraugus Co., N. Y.
The Dayton Cheese Factory No. 10, Dayton, Cattaraugus Co., N. Y.	
Scott's, of Otto, Cheese Factory	Otto, Cattaraugus Co., N. Y.
Howard's Corners Cheese Factory, Dayton, Cattaraugus Co., N. Y.	
Cattaraugus Cheese Factory No. 2	New Albion, Cattaraugus Co., N. Y.
Yorkshire Cheese Factory	Yorkshire, Cattaraugus Co., N. Y.
Ticknor Cheese Factory	Perrysburgh, Cattaraugus Co., N. Y.
Dewey Cheese Factory	Perrysburgh, Cattaraugus Co., N. Y.
Perrysburgh Cheese Factory, Perrysburgh, Cattaraugus Co., N. Y.	
East Leon Cheese Factory	Leon, Cattaraugus Co., N. Y.
Franklinville Cheese Factory No. 5	Franklinville, Cattaraugus Co., N. Y.
Black Cheese Factory	Yorkshire, Cattaraugus Co., N. Y.
West Valley Cheese Factory	Ashford, Cattaraugus Co., N. Y.
Clair Bros.' Cheese Factory No. 8, Ashford, Cattaraugus Co., N. Y.	
The Vedder Cheese Factory, Ellicottsville, Cattaraugus Co., N. Y.	
Baker Stand Cheese Factory No. 2	Machias, Cattaraugus Co., N. Y.
Rock Spring Cheese Factory No. 3	Machias Cattaraugus Co., N. Y.
Pritchard Cheese Factory	New Albion, Cattaraugus Co., N. Y.
Sandusky Cheese Factory No. 5, Freedom, Cattaraugus Co., N. Y.	
Broadway Cheese Factory	Persia, Cattaraugus Co., N. Y.
McKnister Hollow Cheese Factory	Yorkshire, Cattaraugus Co., N. Y.
North Leon Cheese Factory	Leon, Cattaraugus Co., N. Y.
Linwood, No. 4, Cheese Factory	Dayton, Cattaraugus Co., N. Y.
Rug Town, Cheese Factory . . .	Perrysburgh, Cattaraugus Co., N. Y.
Rock Spring, No. 4, Cheese Factory . . .	Franklinville, Cattaraugus Co., N. Y.
Dammons Cheese Factory	Ashford, Cattaraugus Co., N. Y.
Leon Centre Cheese Factory	Leon, Cattaraugus Co., N. Y.
Rock Spring, No. 5, Cheese Factory . . .	Franklinville, Cattaraugus Co., N. Y.

Farrington's, No. 1, Cheese Factory . . .	Franklinville, Cattaraugus Co., N. Y.
Siloam Cheese Factory	Farmersville, Cattaraugus Co., N. Y.
Sandusky, No. 1, Cheese Factory	Freedom, Cattaraugus Co., N. Y.
Abbot's, No. 2, Cheese Factory . . .	Lyndon, Cattaraugus Co., N. Y.
Mosier Cheese Factory	Leon, Cattaraugus Co., N. Y.
Snyder Cheese Factory	Persia, Cattaraugus Co., N. Y.
Elgin Cheese Factory	Lyndon, Cattaraugus Co., N. Y.
Cadiz Union Cheese Factory	Franklinville, Cattaraugus Co., N. Y.
Rock Spring, No. 1, Cheese Factory . . .	Farmersville, Cattaraugus Co., N. Y.
The Riceville Cheese Factory . . .	Ashford, Cattaraugus Co., N. Y.
New Albion Cheese Factory . .	New Albion, Cattaraugus Co., N. Y.
Champlin Cheese Factory . . .	New Albion, Cattaraugus Co., N. Y.
Peace Vale Cheese Factory	Leon, Cattaraugus Co., N. Y.
Springville Cheese Factory	Concord, Erie Co., N. Y.
Sardinia Cheese Factory	Sardinia, Erie Co., N. Y.
Morton's Corners Cheese Factory . .	West Concord, Erie Co., N. Y.
Marshfield Cheese Factory	North Collins, Erie Co., N. Y.
Daniel Sisson Cheese Factory	Collins, Erie Co., N. Y.
Richmond No. 10, Cheese Factory	Sardinia, Erie Co., N. Y.
White Clover Cheese Factory	Sardinia, Erie Co., N. Y.
Johnsonburgh Cheese Factory	Sardinia, Erie Co., N. Y.
Matteson Corners Cheese Factory	Sardinia, Erie Co., N. Y.
Chaffee, No. 1, Cheese Factory	Sardinia, Erie Co., N. Y.
Este's, No. 22, Cheese Factory	Brant, Erie Co., N. Y.
George Sisson Cheese Factory	Collins, Erie Co., N. Y.
North Branch Cheese Factory	North Collins, Erie Co., N. Y.
Smith, No. 9, Cheese Factory	Concord, Erie Co., N. Y.
East Concord Cheese Factory	East Concord, Erie Co., N. Y.
East Concord, No. 3, Cheese Factory, East Concord, Erie Co., N. Y.	
Sardinia Cheese Factory	Sardinia, Erie Co., N. Y.
Crossman Cheese Factory	Sardinia, Erie Co., N. Y.
Newton Cheese Factory	Sardinia, Erie Co., N. Y.
Glenwood, No. 8, Cheese Factory	Colden, Erie Co., N. Y.
Boston Cheese Factory	North Collins, Erie Co., N. Y.

Alden Hill, No. 7, Cheese Factory	Concord, Erie Co., N. Y.
North Concord, No. 8, Cheese Factory ..	Concord, Erie Co., N. Y.
Concord Centre Cheese Factory	Concord, Erie Co., N. Y.
Dye Cheese Factory No. 5	Concord, Erie Co., N. Y.
Waterville Cheese Factory	Concord, Erie Co., N. Y.
Collins Centre Cheese Factory	Collins, Erie Co., N. Y.
Tabor Cheese Factory	North Collins, Erie Co., N. Y.
New Oregon Cheese Factory	North Collins, Erie Co., N. Y.
Marshfield West Branch Cheese Factory	North Collins, Erie Co., N. Y.
White Cheese Factory	Collins, Erie Co., N. Y.
Zore Cheese Factory	Collins, Erie Co., N. Y.
Scrabble Hill Cheese Factory	Collins, Erie Co., N. Y.
Gowanda Cheese Factory No. 4	Collins, Erie Co., N. Y.
New Michigan Cheese Factory	Collins, Erie Co., N. Y.
Holland Cheese Factory	Collins, Erie Co., N. Y.
North Boston Cheese Factory	Boston, Erie Co., N. Y.
Claris Cheese Factory	Collins, Erie Co., N. Y.
Colden Centre Cheese Factory	Colden, Erie Co., N. Y.
Enod Hollow Cheese Factory	Colden, Erie Co., N. Y.
South Colden Cheese Factory	Colden, Erie Co., N. Y.
Boston Centre Cheese Factory	Boston, Erie Co., N. Y.
Protection Cheese Factory	Holland, Erie Co., N. Y.
East Holland Cheese Factory	Holland, Erie Co., N. Y.
The Swiss Cheese Factory	Hamburgh, Erie Co., N. Y.
Hunters Creek Cheese Factory	Wales, Erie Co., N. Y.
The Switzer Cheese Factory	Eden, Erie Co., N. Y.
Eckhardt Cheese Factory	Eden, Erie Co., N. Y.
East Aurora Cheese Factory	Aurora, Erie Co., N. Y.
Wales Hollow Cheese Factory	Wales, Erie Co., N. Y.
Wales Centre Cheese Factory	Wales, Erie Co., N. Y.
East Hamburgh Cheese Factory No. 18	East Hamburgh, Erie Co., N. Y.
East Hamburgh Cheese Factory . .	East Hamburgh, Erie Co., N. Y.
Willink Cheese Factory	East Aurora, Erie Co., N. Y.
Porterville Cheese Factory No. 2	Marilla, Erie Co., N. Y.
Cloverfield Cheese Factory No. 25	Marilla, Erie Co., N. Y.
Marilla Creamery	Marilla, Erie Co., N. Y.

Spring Creek Cheese Factory.....	Alden, Erie Co., N. Y.
Pontiac Cheese Factory.....	Evans, Erie Co., N. Y.
Farnham Cheese Factory.....	Brant, Erie Co., N. Y.
Brant Cheese Factory	Brant, Erie Co., N. Y.
Stickney Cheese Factory	Brant, Erie Co., N. Y.
Eden Centre Cheese Factory.....	Eden, Erie Co., N. Y.
Evans Centre Cheese Factory	Evans, Erie Co., N. Y.
Hunts Cheese Factory.....	Portage, Livingston Co., N. Y.
Nunda Cheese Factory.....	Nunda, Livingston Co., N. Y.
Spaldings Cheese Factory.....	Howard, Steuben Co., N. Y.
Pond Cheese Factory.....	Howard, Steuben Co., N. Y.
Cohocton Valley Creamery.....	Avoca, Steuben Co., N. Y.
Howard Cheese Factory.....	Howard, Steuben Co., N. Y.
Kanona Cheese Factory.....	Avoca, Steuben Co., N. Y.
Bennett Creek Cheese Factory.....	Canisteo, Steuben Co., N. Y.
Faulkner & Willetts Creamery..	Hornellsville, Steuben Co., N. Y.
Cold Spring Cheese Factory.....	Hartsville, Steuben Co., N. Y.
Murrays Hill Cheese Factory.....	Greenwood, Steuben Co., N. Y.
Bryden Hill Cheese Factory.....	Greenwood, Steuben Co., N. Y.
The Greenwood Cheese Factory..	Greenwood, Steuben Co., N. Y.
Greenwood Cheese Factory.....	Greenwood, Steuben Co., N. Y.
Purdy Creek Cheese Factory.....	Hartsville, Steuben Co., N. Y.
Rexville Cheese Factory.....	West Union, Steuben Co., N. Y.
Troupsburg Cheese Factory.....	Troupsburg, Steuben Co., N. Y.
M. P. Dike & Co., Cheese Factory..	West Union, Steuben Co., N. Y.
Woodhull Cheese Factory.....	Woodhull, Steuben Co., N. Y.
Corning Creamery.....	Corning, Steuben Co., N. Y.
Hallett Creamery.....	Cameron, Steuben Co., N. Y.
Empire Cheese Factory.....	Lamont, Wyoming Co., N. Y.
Griffith Corners Cheese Factory.....	Griffith Corners, Wyoming Co., N. Y.
Castile Cheese Factory... ..	Castile, Wyoming Co., N. Y.
Oatka Cheese Factory.....	Oatka, Wyoming Co., N. Y.
Gainsville Cheese Factory.....	Gainsville, Wyoming Co., N. Y.
Silver Spring Cheese Factory..	Silver Springs, Wyoming Co., N. Y.
East Kay Cheese Factory.....	East Kay, Wyoming Co., N. Y.
Excelsior Cheese Factory....	Eagle, Wyoming Co., N. Y.
Campbell Hill Cheese Factory.....	Pike, Wyoming Co., N. Y.

Centennial Cheese Factory.....	Pike, Wyoming Co., N. Y.
Bliss Station Cheese Factory..	Bliss Station, Wyoming Co., N. Y.
Pike Station Cheese Factory...	Pike Station, Wyoming Co., N. Y.
South Eagle Cheese Factory...	South Eagle, Wyoming Co., N. Y.
Eagle Cheese Factory.....	Eagle, Wyoming Co., N. Y.
Cadwells Corners Cheese Factory..	Eagle Station Wyoming Co., N. Y.
Star, No. 1, Cheese Factory..	Weatherfield, Wyoming Co., N. Y.
Wing Street Cheese Factory....	Wing Street, Wyoming Co., N. Y.
Johnsonburgh, No. 2, Cheese Factory,	North Java, Wyoming Co., N. Y.
Weatherfield Springs Cheese Factory.....	Weatherfield Springs, Wyoming Co., N. Y.
Hermitage Cheese Factory.....	Hermitage, Wyoming Co., N. Y.
Arcade Centre No. 8, Cheese Factory...	Arcade Centre, Wyoming Co., N. Y.
J. D. Lewis, No. 7, Cheese Factory..	East Arcade, Wyoming Co., N. Y.
Star, No. 2, Cheese Factory.....	Mud Valley, Wyoming Co., N. Y.
Java Centre, No. A, Cheese Factory.....	Java Centre, Wyoming Co., N. Y.
Cloverfield, No. 12, Cheese Factory.....	Java Village, Wyoming Co., N. Y.
Punkshire, No. 10, Cheese Factory.....	Punkshire, Wyoming Co., N. Y.
Johnsonburgh, No. 12, Cheese Factory.....	Egypt, Wyoming Co., N. Y.
Johnsonburgh, No. 11, Cheese Factory.....	Courier Corners, Wyoming Co., N. Y.
Java Lake Cheese Factory.....	Java Lake, Wyoming Co., N. Y.
County Line, No. 11, Cheese Factory....	County Line, Wyoming Co., N. Y.
Arcade Cheese Factory.....	Arcade, Wyoming Co., N. Y.
Town Line Cheese Factory.....	Town Line, Wyoming Co., N. Y.
Dale Cheese Factory.....	Dale, Wyoming Co., N. Y.
Orangeville, No. 7, Cheese Factory.....	Orangeville, Wyoming Co., N. Y.
A. Green's Cheese Factory.....	Orangeville, Wyoming Co., N. Y.
Branch, No. 8, Cheese Factory..	Orangeville, Wyoming Co., N. Y.
Boale's Cheese Factory.....	Orangeville, Wyoming Co., N. Y.

Johnsonburgh Cheese Factory.....	Athens, Wyoming Co., N. Y.
Johnsonburgh, No. 3, Cheese Factory.....	Sheldon, Wyoming Co., N. Y.
Attica Cheese Factory.....	Attica, Wyoming Co., N. Y.
Johnsonburgh, No. 5, Cheese Factory.....	Bennington, Wyoming Co., N. Y.
Cloverfield, No. 17, Cheese Factory.....	Bennington, Wyoming Co., N. Y.
East Bennington Cheese Factory.....	Bennington, Wyoming Co., N. Y.
Cloverfield, No. 24, Cheese Factory, Bennington, Wyoming	Co., N. Y.
Perry Cheese Factory	Bennington, Wyoming Co., N. Y.
Rekstein Cheese Factory.....	Bennington, Wyoming Co., N. Y.
Strykerville Cheese Factory....	Strykerville, Wyoming Co., N. Y.
Sheldon Cheese Factory.....	Sheldon, Wyoming Co., N. Y.
Cloverfield, No. 22, Cheese Factory..	Sheldon, Wyoming Co., N. Y.
Tosier, No. 5, Cheese Factory.....	Sheldon, Wyoming Co., N. Y.
Cloverfield, No. 14, Cheese Factory..	Sheldon, Wyoming, Co., N. Y.
Johnsonburgh, No. 1, Cheese Factory.....	Orangeville, Wyoming Co., N. Y.
Star, No. 3, Cheese Factory.....	Orangeville, Wyoming Co., N. Y.
Sharp's School House Cheese Factory.....	Warsaw, Wyoming Co., N. Y.
Cloverfield, No. 3, Cheese Factory.....	Bennington, Wyoming Co., N. Y.
Park Cheese Factory.....	Attica, Wyoming N. Y.

Such factories are distributed as follows :

In Allegany county there are	85
In Cattaraugus county there are.....	115
In Chautauqua county there are	95
In Erie county there are.....	63
In Genesee county there are.....	10
In Livingston county there are	2
In Monroe county there are	2
In Niagara county there are... ..	2
In Ontario county there are.....	5
In Orleans county there are.....	2
In Steuben county there are.....	19

In Wayne county there are	4
In Wyoming county there are	57
In Yates county there are	2
Total	<u>463</u>

We have heretofore sent you the report of the inspection made at each of such factories, giving its name, location, the name of the owner and the name of the cheese or butter maker, the number of patrons, the product during the season, the number of cows whose milk was supplied to the factory, the number of pounds of milk furnished daily, the amount of cheese or butter made daily, and the estimated amount made during the season, and the number of pounds of milk required to make a pound of cheese or butter, and such other facts concerning the sanitary condition of the factory, the quality of the milk, the breed of cows and the kind of feed used, as your instructions called for. These facts were gathered with as great care as possible and, although, perhaps in some instances not accurate, are substantially correct.

The results of these inspections place in the hands of this department much valuable information concerning the condition of the dairy interests in Western New York, and will enable it to estimate approximately the product of this section in future years, as well, perhaps, as to determine more accurately than heretofore the comparative value of the different breeds of cows as butter and milk producers.

The foregoing embodies the principal work done by the department in Western New York during the past year, and we have endeavored to avoid going too much into details, and have omitted much of the general routine work done by the employés of the department during the year.

We have endeavored to do the work allotted to us as thoroughly as the means at our disposal would permit, and we are of the opinion that the results accomplished have been very beneficial to the dairy interests of this portion of the State. While everything has not been done that ought to have been done, owing to lack of time and the necessary assistance, we feel assured, that, upon the whole, the work of the department under our charge

has been creditable, and that the work is now so well in hand that, during the coming year, closer attention can be given to the prosecution of offenders, which has been the most serious omission of duty which we have to report, for reasons already stated.

The general condition of the dairy interests throughout this section of the State, is very satisfactory, and dairymen have much reason for gratulation that their products have not been obliged to enter into competition with oleomargarine and other imitations of dairy products in this locality, a fact which has very much redounded to their financial benefit in the increased prices they have received for their products. The benefits already realized will be lasting, and certainly every year will bring a gradual improvement in the quality of all dairy products until the citizens will no longer have cause to complain of the quality of the milk or other products of the dairy which are furnished them.

A large share of the credit, for the good results accomplished, is due to the assistants, agents and counsel, who have been under our supervision, and who have performed their duties carefully and thoroughly, and have evinced a personal interest in the work assigned to them, and have consequently been most efficient and capable servants of the State.

Respectfully submitted.

MARCUS A. PERRY,

Assistant Dairy Commissioner, Buffalo, N. Y.

PATRICK J. SUTLEY,

Assistant Dairy Commissioner, Castile, N. Y.

REPORT OF W. G. SPENCE.

STITTVILLE, N. Y., *November, 1888.*

HON. JOSIAH K. BROWN,

New York State Dairy Commissioner :

I herewith submit the following report of my work as an agent of the department this year in the inspection of milk, etc., at cheese factories and creameries.

About June first, several applications were made to the department for such work by the managers of factories here in the central part of the State, which were forwarded to me with instructions to promptly answer such calls in their order as to date.

During the month of June, I visited the following factories, viz. :

Brighton Factory	Richfield Springs, Otsego county.
Schuyler Lake Factory	Schuyler Lake, Otsego county.
Waterbury Factory	Florence, Oneida county.
Chrestien Factory	Florence, Oneida county.
Tuttle Factory	Camden, Oneida county.
Cornish Factory	near Camden, Oneida county.
Taberg Factory	Taberg, Oneida county.
French Road Factory	Steuben, Oneida county.
Remsen Factory	Remsen, Oneida county.
Crane's Corners Factory	Jordanville, Herkimer county.
Henderson Association Factory, near Jordanville, Herkimer county.	
Cullen Factory	near Richfield Springs, Otsego county.
Thomas Factory	Floyd, Oneida county.

During the month of July, I visited the following factories, viz. :

Stowell Factory	Sandy Creek, Oswego county.
Finster Factory	Lacona, Oswego county.
Ayers Factory	Rice's Station, Jefferson county.

Lamb Factory Unadilla Forks, Otsego county.
 Cascade Factory Burr's Mills, Jefferson county.
 Rodman Factory Adams Centre, Jefferson county.
 Adams Factory Adams, Jefferson county.
 Big Spring Creamery Madison, Madison county.
 Solsville Factory Solsville, Madison county.
 Bartlett Factory East Winfield, Herkimer county.
 Eagle Factory Cross-bridge Station, Herkimer county.

During the month of August, I visited the following factories, viz. :

Crystal Springs Factory Indian Castle, Montgomery county.
 Fulmer Creek Factory Mohawk, Herkimer county.
 Crane's Corners Factory Crane's Corners, Herkimer county.
 Van Hornesville Factory Van Hornesville, Herkimer county.
 South Columbia Factory South Columbia, Herkimer county.
 Brockway Factory No. 2, near South Columbia, Herkimer county.
 Fay Factory near Richfield Springs, Otsego county.
 Dolphin Factory Little Lakes, Herkimer county.
 Miller's Mills Factory Miller's Mills, Herkimer county.
 Dennison Factory Dennison's Corners, Herkimer county.
 Getman Factory near Waterville, Oneida county.
 G. Merry Factory Verona, Oneida county.
 Lowell Factory Lowell, Oneida county.
 Taberg Factory Taberg, Oneida county.
 Elm Grove Factory near Starkville, Herkimer county.
 Galusha Factory Starkville, Herkimer county.
 Newville Association Factory Newville, Herkimer county.
 Hickory Grove Factory Indian Castle, Herkimer county.

During the month of September, I visited the following factories, viz. :

Hatche's Corners Factory Hatche's Corners, Oneida county.
 West Canada Creek Factory near Poland, Herkimer county.
 Rathbunville Factory Rathbunville, Oneida county.
 Rathbun Factory near Rathbunville, Oneida county.
 Newell Factory Coleman's Mills, Oneida county.
 New London Factory New London, Oneida county.

Rome Association Factory near Ridge Mills, Oneida county.
 Westernville Factory Westernville, Oneida county.
 South Western Factory South Western, Oneida county.
 Ridge Creamery Ridge Mills, Oneida county.

A full inspection of all the milk supply of the city of Rome delivered by thirteen peddlers.

Verona Landing Factory Higginsville, Oneida county.
 Cold Spring Factory near Holland Patent, Oneida county.
 Delta Factory Delta, Oneida county.
 Walsworth Factory near Delta, Oneida county.
 Verona Centre Factory Verona Centre, Oneida county.
 Oneida Castle Factory Oneida Castle, Madison county.

During the month of October, I visited the following factories, viz :

Crane's Factory Vernon, Oneida county.
 "V. V." (Vernon & Verona) near Vernon, Oneida county.
 Hecla Factory Hecla Station, Oneida county.
 Lawrence Factory near Clark's Mills, Oneida county.
 Walesville Factory Walesville, Oneida county.
 Stittville Association Factory Stittville, Oneida county.
 Floyd Corners Factory Floyd, Oneida county.
 Button Ball Factory Holland Patent, Oneida county.
 Home Factory (Baggs) near Holland Patent, Oneida county.
 Beaver Creek Factory Holland Patent, Oneida county.
 Kelley Tract Factory near South Trenton, Oneida county.
 Burlington Flats Factory Burlington Flats, Otsego county.

At each of the factories visited I inspected the milk of each patron as he delivered the same. In making this inspection, I generally used the lacto-thermometer. The per cent glass and the pioskope and if from the use of these and its general appearance, I have any doubt as to the quality of a sample of milk, I carefully examine that sample for the purpose of becoming satisfied, and in cases apparently close I make use of our "forced method," which is hereinafter described. After each inspection is completed a record is made in our inspection-book and a dupli-

cate as to quality given to each patron; after the inspection is completed, the regular "factory inspection" blank is filled out and together with a duplicate "inspection sheet," showing the quality of the milk of each patron, forwarded to the Albany office, to which reference is made for further details of this work. Any careful, intelligent person, by using these means, can determine, with great certainty, whether a sample of milk is below the standard. I am justified, in saying this, from my own experience and the experience of the department.

In all cases where prosecutions are to be made for violation of the law, the suspected samples are taken to a chemist for analysis in order to furnish the proof of adulteration which is required by statute.

In every instance the samples taken by me to the chemist for analysis has proven to be adulterated. As a rule and with very few exceptions all these factories are kept clean and all the appliances are in good order. I gave especial attention to the matter of drainage. Generally the factories are reasonably well drained and there is no offensive odor about the place.

In some cases the factory has been located on low ground where drainage is quite difficult. These locations are adopted apparently to suit the convenience of the patrons to save distance in drawing milk. About these factories so located there is generally an offensive odor, which proves conclusively that it was a mistake to locate the factory at that point. Two of the factories visited were in such condition, by reason of lack of drainage and other causes that they were investigated by the local health authorities. I found the milk as delivered at these several factories visited to be, with few exceptions, of good quality and in good condition. In making these inspections I traveled about 2,600 miles, inspected and examined the milk of about 34,000 cows. With very few exceptions these examinations and inspections were made at the request of the proprietors of the factories and creameries. Several of these applications were made because of trouble experienced by the cheese-makers with tainted milk, resulting in loss to cheese-makers and their patrons; in some of these cases adulteration was detected, and in every instance the

cause of taint in the milk was traced and corrected. These examinations and inspections were very satisfactory to the proprietors and patrons of the several factories and creameries and the sentiment prevailed everywhere, that these inspections at each factory ought to be made twice during the season.

FORCED METHOD.

During the winter months of the past three years I have spent a considerable portion of my time in experimenting with milk (without expense to the State), in order to ascertain, if possible, the most practicable and the best *quick method* of reading the quality of milk. During the summer months of the same period while engaged in the work of milk inspector, I have kept the same object in view, working experiments carefully and applying practical tests. With these advantages, and starting with what had heretofore been done of practical value in this direction, the art of detecting adulterations has been advanced, and a quick method, which can be used by anyone who cares to ascertain the quality of milk, has been perfected, by which the percentage of solids can be approximately ascertained, and the possibilities in the matter of ratio of butter or cheese to milk can be quite closely calculated. On page 410, last annual report of the New York State Dairy Commissioner, will be found an inspection of milk from cows of a large herd of registered Jerseys, where this method was employed to ascertain the per cent of cream. On page 411, same report, is found corresponding analysis for same. When introducing this method in that locality last year, samples of milk from different cows of this herd were taken by expert Wiley, properly marked for identification, and delivered to Chemist Sage, of this department; duplicate samples were also delivered to me for test by "forced method." Chemist Sage analyzed the samples in his laboratory, most of which appear on the above-mentioned pages of last annual report. I tested the samples delivered to me in another room, in the presence of expert Wiley and others, who had assembled and were interested in such work. The tests by forced method proved to be approximately concordant with the analysis.

The following table will give approximately the relative yield of butter to volume of milk, with percentage of cream and butter fat which such milk contains, viz. :

	Showing per cent of cream.	Contains per cent of fat.	Yields pounds of butter.
27 $\frac{1}{8}$ pounds of milk or 13 quarts	12	3	1
25 $\frac{3}{8}$ pounds of milk or 12 quarts	15	3 $\frac{1}{2}$	1
23 $\frac{5}{8}$ pounds of milk or 11 quarts	18	4	1
21 $\frac{7}{8}$ pounds of milk or 10 quarts	21	4 $\frac{1}{2}$	1
19 $\frac{9}{10}$ pounds of milk or 9 quarts	24	5	1
17 pounds of milk or 8 quarts	27	5 $\frac{1}{2}$	1
14 $\frac{1}{4}$ pounds of milk or 7 quarts	30	6	1
12 $\frac{1}{2}$ pounds of milk or 6 quarts	33	6 $\frac{1}{2}$	1
10 $\frac{1}{2}$ pounds of milk or 5 quarts	36	7	1

Milk of average quality weighs eight and one-half pounds to the United States standard gallon.

I have employed this method to confirm my own opinion of samples taken because believed to be adulterated, watching closely the determination by the analysis for the past four years, and every sample so taken has proved to be adulterated within the meaning of the statute. With the commencement of the factory inspection season this year it was determined to give this method a practical trial of its value as an indicator of the cheese yield in milk at full cream in factories which were using the State brand in this section. This was done in the following manner, viz. :

A regular inspection was made of the milk delivered by each patron, using a per cent glass in which to float the lacto-thermometer, which gives the temperature and lactometric standing of the milk at one and the same time. The milk so tested was then poured out of the per cent glass into a pail or other vessel of suitable size; this operation was continued until all the milk which was delivered on that day had been inspected. We now had an equal balance by the per cent glass of the milk delivered by each patron, in the pail or vessel, and at its best condition, as pouring from the per cent glass after each inspection has kept it almost constantly agitated, and if any delay occurred in delivery it was stirred with a dipper. Care must be taken to see that the milk is almost constantly agitated so the cream can not separate

from the milk. After stirring so as to make sure that the quality is uniform throughout, we fill the per cent glass up to the fifty mark, this being all the milk required (about a gill), for our purpose. We now fill the per cent glass up to the zero mark with water at a temperature of 88° Fahr. ; then mix by placing the palm of the hand tightly over the top of the per cent glass and turning the glass up side down a few times ; then place the per cent glass in a pail of ice water so as to cover the zero mark, and wait until the per cent can be seen as distinctly as the cream per cent is ordinarily seen in a cream gauge when used in the ordinary manner. This is the time to record the per cent found, as no higher per cent will be seen. The time required varies according to the condition of the milk; the range, as found on average milk at cheese factories, being from ten to seventy-eight minutes, but few samples, however, requiring more than thirty to forty minutes, very many showing as much in from ten to twenty minutes as could at any time afterwards be found. The per cent glass contains fifty parts milk and fifty parts water ; we therefore multiply the per cent as found by two ; from this amount deduct one-third, because experiments have shown such deduction necessary in order to ascertain the percentage of actual cream in the milk. This remainder will be the per cent which governs our rule for ratio of butter or cheese to milk. The range of cream per cent as found at cheese factories was from thirteen and one-half to sixteen and three-quarters. By applying the above rule of ratio, milk which contains thirteen per cent of cream should yield one pound of cheese to twelve pounds of milk ; milk which contains fourteen per cent of cream should yield one pound of cheese to eleven pounds of milk ; milk which contains fifteen per cent of cream should yield one pound of cheese to ten pounds of milk ; milk which contains sixteen per cent of cream should yield one pound of cheese to nine pounds of milk ; milk which contains seventeen per cent of cream should yield one pound of cheese to eight pounds of milk.

At the time these inspections were made at twenty of the factories mentioned above manufacturing the milk of 8,199 cows into full cream cheese and using the State brand (excepting one factory receiving the milk of 250 cows, at which eight of the fif-

teen patrons were allowed to skim the cans of the night milk) I applied the above-mentioned rule of ratio of milk to cheese, and in each case gave to the cheese-maker my figures showing the number of pounds of the inspected milk necessary to make a pound of cheese, and requested him, when the cheese was sold, to inform me of the date of sale and the number of pounds of cheese actually made from that milk.

These inspections were made in different months from June to November, the factories were situated in different counties and the milk was taken from cattle of different breeds and under different conditions as to age, feed, water, care, etc.

I have received reports from these twenty factories and from these it appears that in several instances my figures corresponded with the actual results within a very small fraction of one per cent; in others larger differences appear.

The average number of pounds of milk required to make a pound of cheese in the factories taken together, was 9.53. The average of the actual number of pounds of milk required to make a pound of cheese was 9.655. It appears that it required .125 of a pound of milk to make a pound cheese, more than I predicted after the inspection of the milk at the factory where eight of the patrons were allowed to skim as above mentioned, I informed the cheese-maker that it would require 11.50 pounds of milk to make a pound of cheese. This inspection was made August tenth, and the cheese made from that milk was sold October first, and the report shows that it in fact required 11.36 pounds of milk to make a pound of cheese. The factory at which I found the best milk was visited October fifth and the cheese made from that days milk was sold October thirtieth. I predicted that it would take 8.50 pounds of this milk to make a pound of cheese, the report of actual sale shows that it required 8.67 pounds to make a pound of cheese. At one of these factories, which justly maintains a reputation for making superior cheese which commands the highest price upon the market, great care is taken to prevent the delivery to the factory of tainted or impure milk. Whenever milk is presented to this factory, which is suspected of being tainted or otherwise unfavorably affected, the proprietor, who also makes the cheese, immediately visits the farm

from which the suspected milk came; he takes a sample of milk from each cow of the herd and sets it in test tubes; this means will determine whether milk is tainted, because in every instance tainted milk will overflow the tube. If no taint is found to exist, he carefully looks for the influences which have caused the milk to be out of condition. This is the method employed by careful makers, and if the manager and proprietor of every cheese factory would pursue the same, or similar methods, the quantity of poor milk delivered to cheese factories would be greatly reduced. At several different times, during the present season, I have been requested to visit more factories than I could possibly reach. In order to be of the most service to dairymen and cheese-makers, if would, in my judgment, be well to considerably increase the number of agents and experts of this department, especially during hot weather and the flush of milk so that all our factories could have the benefit of these inspections in due season. I have been informed by the managers of several of these factories, which I have visited and whom I instructed in our method of detecting adulterations, that since my visit they have themselves inspected the milk received and have succeeded in detecting quite a number of patrons who were delivering adulterated milk; highest number at any one factory being four.

Respectfully submitted,

WM. G. SPENCE.

REPORT OF EXPERT BUTTER-MAKERS.

Hon. J. K. BROWN,

State Dairy Commissioner, Capitol, Albany, N. Y.:

DEAR SIR.—We have the honor to submit the following report of the work performed by us during the last dairy season :

On June twenty-ninth, at the invitation of Josiah Shull, Secretary of the State Dairymen's Association, we attended a cheese conference at the factory of Mr. Frank Blanding, in Hubbardsville, Madison county, at which meeting were present a large number of cheese-makers, also quite a number of farmers. We manipulated a vat of milk at this factory by the Cheddar process, as adopted by Dairy Commissioner Brown. The cheese-makers at this meeting expressed themselves as being pleased with the results of our work. After the curd had reached a condition fit to leave for a time we retired to their hall and held a formal meeting for the discussion of the manufacture of cheese and the care of milk, after which we returned to the factory and found our curd in proper condition to cool, salt and grind, which we did and put to press.

The next cheese conference under the auspices of the State Dairymen's Association, to which we were invited, was held at the factory of Mr. Watson, in the village of Canton, St. Lawrence county. At this meeting Mr. H. W. Richardson, of East Aurora, Erie county, proprietor of the Cloverfield combination, was present. Mr. Watson was operating three vats, one of which was handled by W. W. Hall, of Gouverneur, N. Y., one by G. A. Smith, of Frankfort, N. Y., and one by James C. Birge, of Heuvelton, N. Y. Our work was quite satisfactory to ourselves and seemed to be appreciated by the large number of makers present. All points in the manufacture of the cheese while the work was being performed was thoroughly discussed by the visiting makers and cheese-buyers who were present. At 1 p. m. we adjourned to

the board of trade rooms and held a lengthy discussion on the manufacture of cheese, the care of milk and on all subjects pertaining to the dairy, after which we returned to the factory and completed the work of grinding, salting and putting the curd to press.

The next conference was held by Dairy Commissioner Brown at the factory of S. T. Miller, at Constableville, Lewis county, August first. At this factory we worked one vat. The attendance of cheese-makers was good, and they were anxious to find out if there were any special merits in our process, and at the meeting held at the hall afterward there took place an interesting discussion on the manufacture of cheese, care of milk and feeding of stock, and special stress laid on the important part of taking care of the milk before arriving at the factory.

On August seventh we left Utica, in company with Commissioner Brown, for Cuba, Allegany county, where we held a conference on the eighth at the factory at that place. The makers who assembled at this factory were very much interested in our process, as it was entirely different from the method practiced by them, and they appeared very much pleased with the results we obtained. On the evening of the same day we left for Andover, Allegany county, where we held a conference on the ninth. At this place we found them making a very open, porous cheese, which was being shipped to the coal regions of Pennsylvania. While in conversation with the maker and the buyer of cheese in that locality, it appeared that this kind of cheese was not entirely satisfactory to consumers, being tough, leathery and not good flavor, and they were anxious that we should change their make to a closer, mellow, good-flavored cheese. We used every effort to make plain our process and obtained very good results. We returned to Cuba and from there to Filmore, Allegany county, where we held a conference the tenth, which was entirely satisfactory to all concerned. From Filmore we went to Castile, Wyoming county, and held a conference at the Gainsville factory the eleventh; at this factory we found a timid maker, who believed that our process would be ruinous, and was not willing for us to make the cheese unless we would guarantee the product with which request we cheerfully complied. We proceeded with our work and after

being completed, he expressed himself as very much pleased with the results as we had a very fine curd. His helper objected to our process as it required too much time for his convenience as he was engaged for a ball play that afternoon. From this factory we proceeded to Franklinville, Cattaraugus county, where we held another conference, on Monday, the thirteenth. At this factory, Mr. Moore, superintendent of the Cloverfield combination, was present, together with several other representative men of the western New York cheese combination. Here we explained our process as we proceeded with our work, to the satisfaction of the parties present. At this point we parted with Commissioner Brown, who returned to Cortland county and we were accompanied by Assistant Commissioner Perry, of Buffalo, N. Y. From this point we went to Springville, Erie county, where we held a conference the fourteenth. Mr. Beebe, of the Marshville combination, and Mr. Johnson, of the Johnsonburgh combination, and several makers were present. Here Mr. Beebe said he was highly pleased with our mode of handling milk, and that we had a perfect curd up to the time of drawing off the whey and that if we would proceed from that point on by their plan we could not help but make a fancy cheese. We assured him we could accomplish the same results by completing the work our way, which proved to be a fact when completed and was so acknowledged by him. From this point we went to Otto, Cattaraugus county, and held a conference on the fifteenth, and from there to Sinclairville, Chautauqua county, on the seventeenth, which finished the work of Messrs. Smith and Hall in western New York. During this time, Mr. M. T. Morgan, of Winfield, N. Y., was engaged in giving instructions in Jefferson county.

From this time on, up to September eleventh, we were separately engaged in giving instructions in Lewis, Jefferson, St. Lawrence and Oneida counties. At this date we met at the factory of Mr. G. Merry, at Verona, N. Y., and were joined by Dr. R. D. Clark, the department chemist, of Albany, where we prepared a paper for Commissioner Brown, giving in detail our method of manufacturing cheese. This method is hereafter set forth. At the request of the makers of Chautauqua county, one of our number was sent back to give private instructions. On Saturday,

September fifteenth, Mr. Hall went to said county and gave instructions in factories at Ripley, Findley's Lake and Forrestville. We are under obligations to Mr. F. W. Edmunds, of Sherman, N. Y., who spared no pains to assist in the work in which he is highly interested. During the same week Mr. Smith held a series of conferences at the Sayer factory and Homer factory, in Cortland county, and at the Lafayette factory in Tompkins county, with good success. This completed the public meetings, and the balance of the season was spent in giving private instructions by us separately in individual factories.

THE MODIFIED CHEDDAR PROCESS.

The following is "The modified Cheddar Process, as used by the cheese instructors of the New York State Dairy Commission."

The milk is placed in the vat and heated to from 82°-84° Fahr. in the warm weather of the summer, and to 86° Fahr. in the cool weather of the fall. If color is to be used, it should be stirred in thoroughly before adding the rennet.

Sufficient rennet is used to coagulate the milk in from twenty to twenty-five minutes (two and one-half to three ounces rennet extract) and bring the curd into condition fit to cut in from fifty minutes to one hour.

The extract or powder, on account of uniformity of strength, is considered safest to use, and there is not the liability to taints that there is when makers prepare their own rennet in tubs, jars, etc.

The curd is then cut lengthways of the vat with the horizontal knife.

The cutting is begun as soon as the curd will cleave clean from the side of the vat, or break clean before the finger, or cut without breaking before the knife.

It is then cut lengthways and crossways with the perpendicular knife.

The cutting should be all done as soon as possible after beginning, as it is claimed that if the curd is in proper condition, or, in technical language, if it is just hard enough to begin on, the quicker it is cut the less waste there will be.

If the curd is too hard the knife will break off fine particles, which are lost in the whey.

When the cutting is completed the curd is gently agitated for about fifteen minutes.

The heat is then slowly applied up to 90° Fahr., then more rapidly, until the highest point is reached, from 98°–102° Fahr. In order to preserve the most fat the lowest temperature which will cause the complete expulsion of the surplus whey should be used, though with some milk it will be necessary to heat up to 102° Fahr.

Great care should be taken, during the heating process, to stir so thoroughly that not any part of the curd will become overheated by resting too long upon the hot tin ; because this would melt the fat and partially destroy the activity of the rennet in that portion of the curd.

Keep the curd agitated till it reaches the stage of contraction at which it will not pack.

The vat is then covered with a cloth in order to retain an equable heat through all parts of the mass, stirring under the cover occasionally to keep the curd loose.

The curd is allowed to remain in this condition until sufficient acid is developed to show a quarter of an inch of fine thread by the hot iron test.

The whey is then all drawn off and the curd packed about equally on the two sides of the vat, leaving a clear space in the center, for the purpose of draining.

After a few minutes, and for the same purpose, the layers of curd are cut lengthwise through their centers and again crossways into strips or blocks about twelve inches long ; the center strips are turned bottom side up and placed upon the outside strips ; keep well covered with a cloth.

In ten minutes or so the two piles are turned over and placed in the center of the vat, one on the top of the other, forming one row of four layers.

Up to this point the chief object of the process has been to separate the whey from the curd, but from this point out the process is distinctly one of digestion or "assimilation."

The pile is left lying in this way for a time and, as it flattens out, it is again cut and doubled up and kept as close as possible in order to retain the temperature.

It is important that during these manipulations the temperature be kept up to about 98° Fahr., as this is the most favorable for the maturing of the curd, and to have it assume that flaky appearance and velvety feeling which it must do in order to be a perfect curd.

If, from any cause (as tainted milk, etc.), there is a development of gas at this stage, the packing must be continued until the gas cells become flattened and the curd appears solid and shows about the same texture as a perfect curd.

The production of lactic acid fermentation is important here to overcome putrefactive fermentation which is very liable to develop, especially in hot weather, and which is very destructive to the flavor, quality and firmness of the cheese.

When the curd has reached the proper stage of digestion it can be torn into strings and "ribbons" the whole length of the piece like the inner bark of an elm tree, and the torn surface has a fibrillated appearance like the cooked flesh on a chicken's breast.

The curd is now cut up into strips, spread out in the bottom of the vat, allowed to cool down to from 88° to 85° Fahr., and then ground.

The salt is applied as the curd passes through the mill. The salt is then stirred in and the curd is reground and put to press.

The pressure must be slight and applied gradually till the whey is pressed out and the rind is formed.

If it is left in the press from twelve to eighteen hours, it will retain its form better and be more solid than if pressed in less time.

In addition to this we send you herewith a few of the many letters we have received from individuals expressing themselves in commendation of the work that has been done throughout the State.

G. A. SMITH, Frankfort, N. Y.,

M. T. MORGAN, Winfield, N. Y.,

W. W. HALL, Gouverneur, N. Y.,

Cheese Instructors.

TESTIMONIALS.

HEUVELTON, *November 22, 1888.*

MR. W. W. HALL:

DEAR SIR.—Your letter of the twentieth inst., in regard to the method or system of cheese making is received, and in reply must say that I think the method that you have been practicing this summer is the safest and best and must eventually supersede all others. I have been making cheese during the last fourteen years, but did not make a success of the business until I adopted this method about six years ago. On the twentieth of July last I had the pleasure of attending a conference of cheese-makers held at Canton, N. Y., under the auspices of the State Dairymen's Association, presided over by Mr. Josiah Shull, and was much pleased with the discussions as well as the work. I hope that during the next season to see the good work continued with a stronger force of instructors, and I hope also to see many conventions held throughout the State during the coming winter, where the theory of the proper care of milk and its manufacture into butter and cheese, will be thoroughly discussed, and especially the treatment of milk after it is drawn from the cow and delivered at the factory, for I believe much of the success in this great industry depends on this point. I would like to see every dairyman in the State furnished with a small pamphlet containing the rules and regulations for the proper care of milk, and I hope that Mr. Brown will be provided with the necessary appropriation to carry on the good work inaugurated by him.

Yours truly.

J. C. BIRGE.

SHERMAN, N. Y., November 28, 1888.

W. W. HALL, Esq., *Gouverneur, N. Y.*:

DEAR SIR.—Your favor of the twentieth at hand. I was absent ten or twelve days in the west, and found your letter awaiting me on my return.

I mail you a copy of a paper containing notice of the premiums I took at Chicago. Among these are the sweepstakes on cheese.

This cheese was made at the Sheldon's Corners Cheese Factory. You will remember that you made cheese there one day. You see that Mr. Kruse profited by your instructions.

In regard to the system of cheese making as practiced by Smith, Morgan and yourself, I believe that it has been of great value to the cheese-makers of this country. In fact the very plan of sending an expert to each factory to help the cheese-maker, talk with him, and give him new ideas is of untold value.

You know that a cheese-maker has to be confined all the while at his work; has no way of getting out among other factories, and is apt to get careless and slack in his work.

Let it be known that a State expert is in this county, everyone here is wide awake. If this work can only be carried on another year, I will look for a great improvement in New York cheese and a better system of cheese making, that would benefit both the factorymen and the farmers. Hoping to meet you at Oswego, December tenth, I am

Yours truly.

F. W. EDMUNDS.

NEW BREMEN, N. Y., November 1, 1888.

Messrs. R. J. RICHARDSON & Co., *Lowville, N. Y.*:

GENTS.—Replying to your inquiry regarding the visit of Mr. G. A. Smith, would say:

At the time of Mr. Smith's visit I had been having poor milk, as you know, and was unable to get satisfactory results from it. The process of working such milk, as explained and demonstrated

by Mr. Smith, has enabled me to dispose of all imperfect flavors before putting the curd to press, and I have not had a cheese rejected by buyers since the day Mr. Smith spent with me.

Yours truly.

E. J. FISH,
Cheese-maker.

GOUVERNEUR, N. Y., *November 19, 1888.*

FRIEND WALTER.—I have just returned from the neighborhood of the Sylva Lake Factory.

I had a long chat with Kirkpatric, and I want to assure you that if you did not succeed in getting him to adopt *all* the valuable points in the lessons given, you accomplished more than you hoped for.

But your work is only just began. The man who produces and cares for the milk before it reaches the factory, needs to be looked after as much and oftentimes more than the maker at the vat.

How he is to be reached, is a question not so easily answered. Willard's theories and Arnold's scientific treatises have come and gone leaving only here and there their marks for good on the milk-producer. He must be reached in and from the field in which he moves. This may be discouraging, yet it is only too true.

You go to the factory to instruct the cheese-maker, you must go to the farm to reach the milk-producer.

While we appreciate the spirit that prompted our last Legislature to appropriate means to allow our Dairy Commissioner to employ even a limited number of instructors, you and I, yes, hundreds, know that the work is only just begun.

The number of instructors should be doubled, and they should be kept at work the year through. You are nearly through with the cheese-maker — begin soon to labor with the farmer, who produces the milk for the cheese. The past season's experience must have demonstrated to you that the farmer can not be reached during the busy season; but soon, when the cares of the farm are less exacting, he is anxious to listen.

Every meeting appointed by our State Agricultural Society should have a paper, or what is better, listen to the *hard experi-*

ence of you, or some one of your associates on the care of milk. More than that, every one of the 600 prosperous granges in the State would gladly open wide its doors and give you a hearing on this subject.

The good work must not stop. Our next Legislature must hear, and heed the wants of the farmers. The appropriation should be doubled, the number of instructors increased, and their labor divided between the maker and producer, as the necessities of each require.

I fear my letter is already too long — will see you later on this subject.

Very truly.

S. F. HARTLEY.

W. W. HALL, *Gouverneur, N. Y.*

SPRAGUEVILLE, N. Y., *November 24, 1888.*

W. W. HALL, Esq., *Gouverneur, N. Y.:*

DEAR SIR.—After attending the dairy conference at Canton N. Y., July twentieth, I adopted the method of cheese making in my factories as practiced by Mr. G. A. Smith and yourself, and the results of my change is good. I think I can retain more fat and expel more whey than under the old method. This gives the cheese a close, mellow texture, and in my opinion very much improves the keeping qualities. In my opinion this method will be more generally adopted next season.

Very truly yours,

J. F. HODGKIN.

GOUVERNEUR, *November 26, 1888.*

W. W. HALL, Esq.:

DEAR SIR.—Having noticed an improvement in the quality of our cheese offered on our board of trade the past sixty days, I am compelled to inquire the cause. Our best makers say that the improved system of cheese making, as practiced by you and our Canadian makers, is an improvement on our old system. I hope you will continue to keep up the improvement, and that our

farmers will see the necessity of bringing to the factory a better quality of milk, and that we shall no longer be compelled to take a second seat in the markets of the world to our Canadian neighbors.

Very truly yours.

HIRAM B. KEENE,
President Gouverneur Board of Trade.

LOWVILLE, N. Y., November 30, 1888.

To whom it may concern :

This certifies that, during the months of August and September, of the above year, Mr. G. A. Smith spent considerable time among the cheese factories of Lewis county, and we are satisfied that the cheese-makers derived great benefit from his instruction. We know of several instances where the market value of the cheese product was materially advanced, and this increase of value dates from the day of Mr. Smith's visit. We regard him as a careful and efficient cheese-maker.

R. J. RICHARDSON & CO.

WINDECKER, LEWIS COUNTY, N. Y.

Agreeable to previous notice, Mr. G. A. Smith, an expert connected with the State Dairy Department, gave an exhibit in cheese-making at the South Harrisburgh factory, situated at this place, on September twenty-eighth.

The meeting was well attended, there being twelve makers from the surrounding factories, and several others interested, present.

The unanimous opinion was that the exhibit was very beneficial, both in the instruction imparted by Mr. Smith and the interchange of ideas between those present.

I venture to say that I but express the opinion of the majority of those who have given the work any attention when I say that we should have more, instead of less, in the years to come.

WM. S. WINDECKER,
Secretary and Salesman, South Harrisburgh Fact'y, Windecker, N. Y.

We hereby take pleasure in certifying to the benefits resulting from the visits of Cheese expert M. T. Morgan, of Herkimer county, in this section the past season, knowing that he has induced the various manufacturers, wherever he has visited a factory, to use greater diligence and more care in the manufacture of cheese, thereby producing a greater uniformity of the goods for market, and we furthermore say that it is of vital importance that a cheese instructor for Jefferson and Lewis counties be appointed early the coming season, and that the same should be a salaried officer in order to secure the best talent :

Anson Miller, Miller's Factory; J. H. Parker, cheese-maker, B. P. Smith Factory; George A. Lowe, maker, Spring Side Factory; G. O. Wood, South Rodman; A. E. Gove, Pamela Four Corners, Clover Dale Factory; C. L. Bacon, Windmill, E. Hounsfield Factory; Gould & I. Bacon, manufacturers, Gould Factory; Thomas McMichael; W. A. Winslow; R. B. Scott, Tylerville Factory; William Sullivan, Pinckney; Daniel Devendorf, Depauville Valley; P. C. Parkinson, Parkinson Factory; W. P. Green, West Rodman; A. D. Boyd, Rodman; B. R. Manns, Cascade Factory, Burr's Mills; E. A. Ayers, Ayer's Cheese Factory; S. I. Ball, Pamela Four Corners Factory; H. S. Dean, East Rodman Factory.

To the State Dairy Department:

We, the undersigned members of the Jefferson County Dairy-men's Association, both buyers and salesmen, hereby take pleasure in expressing our approbation of the methods which the State Dairy Department, through the State Dairy Commissioner and his agents, has adopted the last year, particularly in Northern New York, in inspecting milk, and, also, as well of the course the department has taken in appointing milk inspectors and experts in cheese making in this section.

The method, although only adopted late in the season, has already shown its beneficial results, which are acknowledged by all parties in interest, and we hereby take the liberty to make the following suggestions to your said department, having seen the benefit to be derived from thorough milk inspection, thereby

securing to the manufacturers pure milk, which all concede is the basis of success in the making of fine, clean-flavored and perfect butter and cheese :

First. That it shall be the duty of the milk inspector to visit the various butter and cheese factories in Northern New York frequently from April first to close of seasons, thereby securing to the manufacturers better milk, and relieving the makers from all censure or fault-finding on the part of the patrons ; for should it be understood that the inspectors were liable to make an inspection of the milk at any time, night or day, it would have the tendency to make the patrons more careful in cooling and aerating their milk, thereby relieving it of animal and other foul taints.

Second. That, in order to attain the above result, we believe the milk inspector should be a salaried officer, the better to enable him to give his entire attention to the work ; for it is conceded on all sides that the loss throughout the 150 to 175 butter and cheese factories in Jefferson and Lewis counties, amounting to nearly \$20,000 yearly, is largely due to the attempt to manufacture butter and cheese from impure and unwholesome milk.

I. C. Cooper, Theresa, N. Y., buyer and seller, manufacturer ; J. T. Hurlbert, representing A. A. Ayer & Co., Montreal ; G. Flanders, Freeman Factory ; H. B. Churchill, President Tylerville Factory ; Walter Zimmerman, President Watertown Board Trade ; C. P. Clark, salesman, B. P. Smith & Sons' Factory ; D. N. Locklin, salesman, Babcock Champion Factory ; J. H. Parker, maker, B. P. Smith's Factory ; Geo. A. Lowe, maker, Spring Side Factory ; Anson Miller, cheese-maker of Smith Factory, Rodman ; David Devendorf, salesman, De Pauville Valley Factory ; J. E. Green, buyer for Stephen Underkirk, New York ; L. S. Stockwell, salesman, Lead's Factory ; G. O. Wood, salesman, South Rodman ; Fred. Howland ; A. E. Gove, Cloverdale, manufacturer ; E. H. Hungerford—Montreal, D. A. McPherson—New York, John Shallon ; W. A. Winslow, buyer, John Orpe, New York ; Wm. Schell, Jefferson Valley Factory ; A. N. Ingraham, M. Fulsom, New York ; W. F. Fosgate, G. W. Martin & Brother, New York ; A. W. Hadsall, salesman and manufacturer ; A. W. Munk, Secretary Watertown Board of

Trade, and Jefferson County Dairymen's Association ; Gould & Bacon, manufacturers ; Thomas McMichael, buyer ; S. D. Ball, Pamela Four Corners Factory ; Frank B. Swift, Alex. W. Grant, R. B. Scott, salesmen, Tylerville Factory ; Wm. Sullivan, Ferguson Factory ; P. C. Parkinson, Parkinson Factory ; W. P. Green, West Rodman ; Harrison Fuller, Adams Centre, Fuller Combination ; E. A. Ayers, Ayers' Cheese Factory ; H. S. Dean, salesman, East Rodman Factory ; A. C. Comstock, Member of Assembly, Second district Jefferson county, salesman of Barber & Reeve Factory ; B. J. Strough, supervisor, Orleans, buyer ; Edward Spicer, supervisor, Brownville, salesman, Excelsior Factory ; Jay W. Waldo, supervisor, Rutland, South Champion Creamery ; Fred. V. Haas, supervisor Clayton, salesman, Farmer's Factory ; H. J. Lane, Member of Assembly, First district Jefferson county, Sackett's Harbor, N. Y. ; J. Stears, Jr., Stears' Creamery, and clerk of board of Jefferson county supervisors.

Dated, WATERTOWN, N. Y., *November 28, 1888.*

To the Hon. J. K. BROWN,

Dairy Commissioner of New York :

In transmitting my first annual report, as cheese instructor, I congratulate the department and myself upon the way I was received in every instance, and the willingness in which cheese-makers and farmers received such instruction as I could give them.

My first visit was in Herkimer county the last of July, with G. A. Smith. In August my work was in Jefferson county, and was not as favorable for me, on account of the excessive dry weather, which gave the milk a bad flavor caused by the cows feeding in the timber and low marshy places. The milk was very poor in quality and required the utmost diligence, on the part of the producer, to get it to the factory in proper condition for the manufacture of cheese. .

But in all the factories I visited, numbering about thirty-seven, all expressed themselves well pleased with our process of manufacture, and the farmers with the instruction as regards the care of milk.

In Madison county, in September, there was abundance of feed in pastures, and milk in fairly good condition. It being a "hop

district," but little interest was manifested by the farmers, but the cheese-makers were anxious to take advantage of every opportunity to inform themselves upon any improved method.

In Oneida and Otsego counties, the last of September and October, the most of the factories were skimming their night's milk. This practice is very general in this locality and the manufacturers are, as a rule, fighting the skimmer as best they can, and I believe it is fast going out of practice.

Respectfully yours.

M. T. MORGAN.

Hon. J. K. BROWN,

State Dairy Commissioner, Albany, N. Y.:

In sending my first annual report as cheese instructor, I can say that the work has been very much better received than I expected in the first start, and there has been a general wish expressed by cheese-makers that they want more of the same kind of work. It has been quite difficult for us to reach the dairymen and convince them that quite as much depended on them, in the care of their milk, to have it reach the factory in proper condition, as in the manufacture after it is put in the vat. But can say that we think we have made a good beginning. I send names of factories visited in the different counties.

Yours respectfully.

G. A. SMITH.

Hon. J. K. BROWN,

State Dairy Commissioner, Capitol, Albany, N. Y.:

DEAR SIR.—I have the honor to submit the following report of the work performed by me for the season ending November 1, 1888:

The following cheese factories were visited by me after my appointment, June nineteenth:

In the county of Oneida.—Cassville Factory; North Bridgewater Factory; R. W. Sessions Factory; Beaver Creek Factory; J. C. Owens Factory; R. E. Jones Factory; J. B. Witherell Factory; Conways Factory; Mitchel's Factory; Cold Spring Factory;

French Road Factory; Jackson's Factory; Meadow Brook Factory; Union Factory; Eagle Factory; Cornish Factory; Miller Factory; Merry Factory.

In the county of Herkimer.—N. J. Staring Factory; Blazier Factory; Hinkley Factory; Delevan's Factory; Short Lots Factory; Walnut Grove Factory; Oyer & Lint's Factory; Norton Factory; Moon's Factory; Geo. H. Davis Factory; W. Budlong Factory.

In the county of Madison.—North Brookfield Factory; Excelsior Factory; Maple Grove Factory; East Boston Factory; Sheds. Corners Factory; Blanding Factory; Osgood Factory; Lakeport Factory; Clockville Factory.

In the county of Lewis.—S. T. Miller Factory; Lowville Factory; Croghan Factory; Empire Factory; Maple Ridge Factory; Housville Factory; Valley Factory; Williams Factory; Sulphur Spring Factory; Beaver Fall Factory; F. W. Christien factory; Old Harrisburg Factory; Cold Spring Factory; South Harrisburg Factory; Gowdy Factory; G. S. Auger Factory; Peterie's Factory; Glendale Factory; Valley Spring Factory; State Road Factory; Van Arnam Factory.

In the county of Oswego.—Williamstown Factory; Phoenix Factory; Castor Factory; Empire Factory; Salisbury Factory; L. E. Finster Factory; North Road Factory; Holmes Factory; Dewey Factory; Farmers Factory; Sandy Creek Factory; Earl Factory.

St Lawrence county.—Watson Factory.

Allegany county.—Cuba Factory; Andover Factory; Fillmore Factory.

Erie county.—Springville Factory.

Chautauqua county.—Sinclairville Factory.

Jefferson county.—Evans Mills Factory.

Wyoming county.—Gainesville Factory.

Cattaraugus county.—Franklinville Factory; Otto Factory.

Cortland county.—Sayer Factory; Homer West Hill Factory.

Tompkins county.—Laffayette Factory.

Yours respectfully.

G. A. SMITH.

The following cheese factories were visited by me during the past season, after my appointment made June 1, 1888 :

In the county of St. Lawrence.—Somerville Factory ; N. Y. S. No. 33 Factory ; West Hermon Factory ; River Road Factory ; Sylvia Lake Factory ; Fowler Factory ; West Gouverneur Factory ; Brazies Corners Factory ; Hickory Lake Factory ; Cold Spring Factory ; Crystal Spring Factory ; Richville Factory ; Gilt Edge Factory ; Clare Factory ; Elm Grove Factory ; South Hermon Factory ; East Gouverneur Factory ; Hailesboro Factory ; Cream of the Valley Factory ; Watson Canton Factory ; South Fowler Factory ; Hodgkin Factory ; Steel's Corners Factory ; Maple Grove Factory ; J. E. Sprague Factory ; Dupontville Factory ; Island Branch Factory ; South Gouverneur Factory ; Gouverneur Factory ; Heuvelton Factory ; Sprague Factory ; Fair View Factory ; Barnhart's Island Factory ; Oswegatchie Factory ; Model Factory ; I. X. L. Factory ; Center Factory ; Morristown Factory ; St. Lawrence Factory ; Brier Hill Factory ; North Hammond Factory ; Marvin Hill Factory ; Hammond Factory ; Griffith Factory ; Wegatchie Factory ; Johnstown Factory ; Edward's Village Factory ; White Clover Factory ; Simond Creek Factory ; Frontier Factory ; Cowpath Factory ; Lalone Factory ; Pierce Factory ; Corbin Factory ; Porter Hill Factory ; Bichie Factory ; Hermon Village Factory ; Belleville Factory ; East De Kalb Factory.

Jefferson county.—Dixon Factory ; East Antwerp Factory ; Oxbor Factory.

Lewis county.—Constableville Factory.

Oneida county.—G. Merry Factory.

Allegany county.—Cuba Factory ; Fillmore Factory ; Andover Factory.

Wyoming county.—Gainesville Factory.

Madison county.—Hubbardsville Factory.

Cattaraugus county.—Franklinville Factory ; Otto Factory.

Erie county.—Springville Factory.

Chautauqua county.—Sinclairville Factory ; Ripley Factory ; Findley's Lake Factory ; Forrestville Factory.

I have also forwarded application for State brand for the following factories :

In St. Lawrence county.— Cream of the Valley Factory ; Elm Grove Factory ; South Hermon Factory ; Brazies Corners Factory ; West Gouverneur Factory ; Canton Village Factory ; Hodgkin Factory ; Dupontville Factory ; Fair View Factory ; Model Factory ; Center Factory ; St. Lawrence Factory ; Oswegatchie Factory, which was returned not used ; Griffith Factory ; Wegatchie Factory ; Edwards Village Factory ; Frontier Factory.

Jefferson county.— Dickson Factory.

Chautauqua county.— Four brands for John McAdam's factories.

Yours respectfully.

W. W. HALL.

Dated, GOUVERNEUR, *November 1, 1888.*

ABSTRACT OF REPORT ON MILK, By R. W. MOORE.*

- I. Introduction and historical account.
- II. General physical properties of milk.
- III. Chemical composition of milk.
- IV. Chemical analysis of milk.
 - a. Discussion of various methods.
 - b. Practical method for examination.
- V. Milk standards, with results on which such standards are based.
- VI. Normal milk as determined by application of standards, and abnormal milk and causes producing it.
- VII. Milk products.
 - a. Cream and skim milk.
 - b. Condensed and preserved milk.
 - c. Milk sugar and application of milk in the arts.
- VIII. General considerations relating to the adulteration of milk; nature and list of adulterants, with methods for their detection.
- IX. Milk supply in New York; manner in which milk is handled, and general view of inspection of milk and sanitary importance thereof.

* The manuscript was lost before reaching this office, and we were unable to get a duplicate in time for this report.

L A W S

RELATING TO

DAIRY PRODUCTS.

LAWS RELATING TO DAIRY PRODUCTS.

CHAPTER 202.

AN ACT to prevent deception in sales of dairy products.

PASSED April 24, 1884; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

(Amended by section 1 of chapter 577 of Laws of 1886, and chapter 222 of Laws of 1887.)

SECTION 1. No person or persons shall sell or exchange, or expose for sale or exchange, any unclean, impure, unhealthy, adulterated or unwholesome milk, or shall offer for sale any article of food made from the same or of cream from the same. This provision shall not apply to pure skim cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming. Whoever violates the provisions of this section is guilty of a misdemeanor and shall be punished by a fine of not less than twenty-five nor more than two hundred dollars, or by imprisonment of not less than one or more than six months, or by both such fine and imprisonment for the first offense, and by six months imprisonment for each subsequent offense.

(Section 2 of chapter 183 of Laws of 1885, practically substituted.)

§ 2. No person shall keep cows for the production of milk for market, or for sale or exchange, or for manufacturing the same, or cream from the same, into articles of food, in a crowded or unhealthy condition, or feed the cows on food that is unhealthy or that produces impure, unhealthy, diseased or unwholesome milk. No person shall manufacture from impure, unhealthy, diseased, or unwholesome milk, or of cream from the same, any article of food. Whoever violates the provisions of this section is guilty of a misdemeanor and shall be punished by a fine of not less than twenty-five nor more than two hundred dollars, or by imprisonment of not less than one or more than four months, or by both such fine and imprisonment for the first offense, and by four months imprisonment for each subsequent offense.

(Section 3 of chapter 183 of Laws of 1885, practically substituted.)

§ 3. No person or persons shall sell, supply or bring to be manufactured to any butter or cheese manufactory; any milk diluted with water, or any unclean, impure, unhealthy, adulterated, or unwholesome milk, or milk from which any cream has been taken (except pure skim milk to skim cheese factories), or shall keep back any part of the milk commonly known as "strippings," or shall bring or supply milk to any butter or cheese manufactory that is sour (except pure skim milk to skim cheese factories). No butter or cheese manufactories, except those who buy all the milk they use, shall use for their own benefit, or allow any of their employés or any other person to use, for their own benefit, any milk, or cream from the milk, or the product thereof brought to said manufactories, without the consent of the owners thereof. Every butter or cheese manufacturer, except those who buy all the milk they use, shall keep a correct account of all the milk daily received, and of the number of pounds and packages of butter, the number and aggregate weight of cheese made each day, the number of packages of cheese and butter disposed of, which shall be open to inspection to any person who delivers milk to such manufacturer. Whoever violates the provisions of this section shall be guilty of a misdemeanor and shall be punished for each offense by a fine of not less than twenty-five or more than two hundred dollars, or not less than one or more than six months imprisonment, or both such fine and imprisonment.

(Section 4 of chapter 183 of Laws of 1885, practically substituted.)

§ 4. No manufacturer of vessels for the package of butter shall sell or dispose of any such vessels without branding his name and the true weight of the vessel or vessels on the same with legible letters or figures not less than one-fourth of an inch in length. Whoever violates the provisions of this section is guilty of a misdemeanor and shall be punished for each offense by a fine of not less than fifty nor more than one hundred dollars, or by imprisonment of not less than thirty or more than sixty days, or by both such fine and imprisonment.

(Section 5 of chapter 183 of Laws of 1885, practically substituted.)

§ 5. No person shall sell or offer or expose for sale any milk except in the county from which the same is produced, unless each can, vessel or package containing such milk shall be distinctly and durably branded with letters not less than one inch in length, on the outside, above the center, on every can, vessel or package containing such milk, the name of the county from which the same is produced, and the same mark shall be branded or painted in a conspicuous place on

the carriage or vehicle in which the milk is drawn to be sold, and such milk can only be sold in, or retailed out of, a can, vessel, package or carriage so marked. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five nor more than two hundred dollars, or not less than two months or more than four months imprisonment, or both such fine and imprisonment for the first offense, and by four months imprisonment for each subsequent offense.

(Section 6 of chapter 183 of Laws of 1885, practically substituted.)

§ 6. No person shall manufacture out of any oleaginous substance or substances, or any compound of the same, other than that produced from unadulterated milk, or cream from the same, any article designed to take the place of butter or cheese produced from pure, unadulterated milk or cream of the same, or shall sell, or offer for sale the same as an article of food. This provision shall not apply to pure skim milk cheese made from pure skim milk. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than one hundred nor more than five hundred dollars, or not less than six months or more than one years imprisonment, or by both such fine and imprisonment, for the first offense, and by imprisonment for one year for each subsequent offense.

(Section 10 of chapter 183 of Laws of 1885, practically substituted.)

§ 7. No person shall offer, sell or expose for sale in full packages, butter or cheese branded or labeled with a false brand or label as to county or State in which the article is made. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five or more than fifty dollars, or imprisonment of not less than fifteen or more than thirty days, for the first offense, and fifty dollars or thirty days imprisonment for each subsequent offense.

(Section 11 of chapter 183 of Laws of 1885, practically substituted.)

§ 8. No person shall manufacture, sell, or offer for sale, any condensed milk unless the same shall be put up in packages, upon which shall be distinctly labeled or stamped the name or brand by whom or under which the same is made. No condensed milk shall be made or offered for sale unless the same is manufactured from pure, clean, healthy, fresh, unadulterated and wholesome milk, from which the cream has not been removed, or unless the proportion of milk solids contained in the condensed milk shall be in amount the equivalent of twelve per centum of milk solids in crude milk, and of such solids twenty-five per centum shall be fat. When condensed milk shall be

sold from cans or packages not hermetically sealed, the vendor shall brand or label such cans or packages with the name of the county or counties from which the same was produced, and the name of the vendor. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than fifty or more than five hundred dollars, or by imprisonment of not more than six months, or both such fine and imprisonment for the first offense, and by six months imprisonment for each subsequent offense.

(Section 12 of chapter 183 of Laws of 1885, practically substituted.)

§ 9. The Governor, by and with the advice and consent of the Senate, shall appoint a commissioner, who shall be known as the New York State Dairy Commissioner, who shall be a citizen of this State, and who shall hold his office for the term of two years, or until his successor is appointed, and shall receive a salary of three thousand dollars per annum and his necessary expenses incurred in the discharge of his official duties under this act; said commissioner shall be appointed within ten days after the passage of this act, and shall be charged, under the direction of the Governor, with the enforcement of the various provisions thereof. Said commissioner may be removed from office at the pleasure of the Governor, and his successor appointed as above provided for.

The said commissioner is hereby authorized and empowered to appoint such assistant commissioners and to employ such experts, chemists, agents and such counsel as may be deemed by him necessary for the proper enforcement of this law. The compensation to be fixed by the commissioner.

The said commissioner is also authorized to employ a clerk at an annual salary not to exceed twelve hundred dollars.

The sum of thirty thousand dollars is hereby appropriated to be paid for such purpose out of any moneys in the treasury not otherwise appropriated. All charges, amounts and expenses authorized by this act shall be paid by the Treasurer of the State, upon the warrant of the Comptroller. The entire expense of said commissioner shall not exceed the sum appropriated for the purposes of this act.

The said commissioner shall make annual reports to the Legislature, not later than the fifteenth day of January of each year, of his work and proceedings, and shall report in detail the number of assistant commissioners, experts, chemists, agents and counsel he has employed, with their expenses and disbursements. The said commissioner shall have a room in the New Capitol, to be set apart for his use by the Capitol Commissioner.

(Section 12 of Chapter 183 of Laws of 1885, practically substituted.)

§ 10. The said commissioner and assistant commissioners, and such experts, chemists, agents and counsel as they shall duly authorize for the purpose, shall have full access, egress and ingress to all places of business, factories, farms, buildings, carriages, cars, vessels and cans used in the manufacture and sale of any dairy products or any imitation thereof. They shall also have power and authority to open any package, can or vessel containing such articles which may be manufactured, sold or exposed for sale in violation of the provisions of this act, and may inspect the contents therein and may take therefrom samples for analyses.

(Section 14 of chapter 183 of Laws of 1885, practically substituted.)

§ 11. Courts of Special Sessions shall have jurisdiction of all cases arising under this act, and their jurisdiction is hereby extended so as to enable them to enforce the penalties imposed by any or all of the sections thereof.

(Section 15 of chapter 183 of Laws of 1885, practically substituted.)

§ 12. In all prosecutions under this act the costs thereof shall be paid out of the fine, if one is collected; if not, the same shall be paid in the manner now provided for by law, and the rest of the fine shall be paid to the State Treasurer.

(Section 16 of chapter 183 of Laws of 1885, practically substituted.)

§ 13. In all prosecutions under this act, relating to the sale and manufacture of unclean, impure, unhealthy, adulterated or unwholesome milk, if the milk be shown to contain more than eighty-eight per centum of water or fluids or less than twelve per centum of milk solids which shall contain not less than three per centum of fat, it shall be declared adulterated, and milk drawn from cows within fifteen days before and five days after parturition, or from animals fed on distillery waste, or any substance in the state of putrefaction, or fermentation, or upon any unhealthy food whatever, shall be declared unclean, impure, unhealthy and unwholesome milk. This section shall not prevent the feeding of ensilage from silos.

(Section 17 of chapter 183 of Laws of 1885, practically substituted.)

§ 14. The doing of anything prohibited being done, and the not doing of anything directed to be done in this act shall be presumptive evidence of a willful intent to violate the different sections and provisions hereof.

§ 15. Chapters four hundred and sixty-seven of the Laws of eighteen hundred and sixty-two, five hundred and forty-four and five hundred and eighteen of the Laws of eighteen hundred and sixty-four, five hundred and fifty-nine of the Laws of eighteen hundred and sixty-five, four hundred and fifteen of the Laws of eighteen hundred and seventy-seven, two hundred and twenty and two hundred and thirty-seven of the Laws of eighteen hundred and seventy-eight, four hundred and thirty-nine of the Laws of eighteen hundred and eighty, and two hundred and fourteen of the Laws of eighteen hundred and eighty-two, are hereby repealed.

§ 16. This act shall take effect on the first day of June, eighteen hundred and eighty-four, except as otherwise provided therein.

CHAPTER 183.

AN ACT to prevent deception in the sale of dairy products, and to preserve the public health, being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in the sales of dairy products."

PASSED April 30, 1885; three fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

(Amended by chapter 223 of Laws of 1887.)

SECTION 1. No person or persons shall sell or exchange, or expose for sale or exchange, any unclean, impure, unhealthy, adulterated or unwholesome milk, or shall offer for sale any article of food made from the same, or of cream from the same. The provisions of this section shall not apply to skim milk sold to bakers or to housewives for their own use or manufacture, upon written orders for the same, nor to skim milk sold for use in the county in which it is produced. This provision shall not apply to pure skim cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or by imprisonment of not less than one month or more than six months, or by both such fine and imprisonment for the first offense, and by six months imprisonment for each subsequent offense.

§ 2. No person shall keep cows for the production of milk for market, or for sale or exchange, or for manufacturing the same, or cream

for the same, into articles of food, in a crowded or unhealthy condition, or feed the cows on food that is unhealthy, or that produces impure, unhealthy, diseased or unwholesome milk. No person shall manufacture from impure, unhealthy, diseased or unwholesome milk, or of cream from the same, any article of food. Whoever violates the provision of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars, nor more than two hundred dollars, or by imprisonment of not less than one month or more than four months, or by both such fine and imprisonment for the first offense, and by four months imprisonment for each subsequent offense.

§ 3. No person or persons shall sell, supply or bring to be manufactured to any butter or cheese manufactory, any milk diluted with water, or any unclean, impure, unhealthy, adulterated or unwholesome milk, or milk from which any cream has been taken (except pure skim milk to skim cheese factories), or shall keep back any part of the milk commonly known as "strippings," or shall bring or supply milk to any butter or cheese manufactory that is sour (except pure skim milk to skim cheese factories). No butter or cheese manufactories, except those who buy all the milk they use, shall use for their own benefit, or allow any of their employes or any other person to use for their own benefit, any milk, or cream from the milk, or the product thereof, brought to said manufactories, without the consent of the owners thereof. Every butter or cheese manufacturer, except those who buy all the milk they use, shall keep a correct account of all the milk daily received, and of the number of packages of butter and cheese made each day, and the number of packages and aggregate weight of cheese and butter disposed of each day, which account shall be open to inspection to any person who delivers milk to such manufacturer. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and shall be punished for each offense by a fine of not less twenty-five dollars, or more than two hundred dollars, or not less than one month or more than six months imprisonment, or both such fine and imprisonment.

§ 4. No manufacturer of vessels for the package of butter shall sell or dispose of any such vessels without branding his name and the true weight of the vessel or vessels on the same, with legible letters or figures not less than one-fourth of an inch in length. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished for each offense by a fine of not less than fifty dollars nor more than one hundred dollars, or by imprisonment of not

less than thirty days or more than sixty days, or by both such fine and imprisonment.

§ 5. No person shall sell, or offer or expose for sale, any milk except in the county from which the same is produced, unless each can, vessel or package containing such milk shall be distinctly and durably branded with letters not less than one inch in length, on the outside above the center, on every can vessel or package containing such milk the name of the county from which the same is produced; and the same marks shall be branded or printed in a conspicuous place on the carriage or vehicle in which the milk is drawn to be sold; and such milk can only be sold in, or retailed out of a can, package or carriage so marked. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or not less than two months or more than four months imprisonment, or both such fine and imprisonment, for the first offense, and by four months imprisonment for each subsequent offense.

INVALID — (PEOPLE v. MARX).

§ 6. No person shall manufacture out of any oleaginous substance or substances, or any compound of the same, other than that produced from unadulterated milk, or of cream from the same, any article designed to take the place of butter or cheese produced from pure unadulterated milk or cream of the same, or shall sell or offer for sale, the same as an article of food. This provision shall not apply to pure skim-milk cheese, made from pure skim milk. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than two hundred dollars nor more than five hundred dollars, or not less than six months or more than one years imprisonment, or both such fine or imprisonment for the first offense, and by imprisonment for one year for each subsequent offense.

(Amended by section 2 of chapter 577 of Laws of 1886.)

§ 7. No person by himself, or his agents or servants shall render or manufacture out of any animal fat or animal or vegetable oils not produced from unadulterated milk or cream from the same, any article or product in imitation or semblance of, or design to take the place of natural butter or cheese produced from pure unadulterated milk or cream of the same, nor shall he or they mix, compound with, or add to milk, cream or butter, any acids or other deleterious substance or any animal fats or animal or vegetable oils not produced from milk or cream, with design or intent to render, make or produce

any article or substance or any human food in imitation or semblance of natural butter or cheese, nor shall he sell, keep for sale, or offer for sale any article, substance or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this State or in any other State or country. Whoever violates the provisions of this section shall be guilty of a misdemeanor and be punished by a fine of not less than two hundred dollars nor more than five hundred dollars, or not less than six months or more than one years imprisonment for the first offense, and by imprisonment for one year for each subsequent offense. Nothing in this section shall impair the provisions of section six of this act.

(Amended by section 3 of chapter 577 of Laws of 1886.)

§ 8. No person shall manufacture, mix or compound with or add to natural milk, cream or butter any animal fats or animal or vegetable oils, nor shall he make or manufacture any oleaginous substance not produced from milk or cream, with intent to sell the same for butter or cheese made from unadulterated milk or cream, or have the same in his possession, or offer the same for sale with such intent, nor shall any article or substance or compound so made or produced, be sold for butter or cheese, the product of the dairy. If any person shall coat, powder or color with annatto or any coloring matter whatever, butterine or oleomargarine, or any compounds of the same or any products or manufacture made in the whole or in part from animal fats or animal or vegetable oils not produced from unadulterated milk or cream whereby the said product, manufacture or compound shall be made to resemble butter or cheese, the product of the dairy, or shall have the same in his possession, or shall sell or offer for sale or have in his possession any of the said products which shall be colored or coated in semblance of or to resemble butter or cheese, it shall be conclusive evidence of an intent to sell the same for butter or cheese, the product of the dairy. Whoever violates any of the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than two hundred dollars nor more than one thousand dollars. This section shall not be construed to impair or affect the prohibitions of sections six and seven of this act.

§ 9. Every manufacturer of full-milk cheese may put a brand upon each cheese indicating "full-milk cheese," and the date of the month and year when made; and any person using this brand upon any cheese made from which any cream whatever has been taken

shall be guilty of a misdemeanor, and shall be punished for each offense by a fine of not less than one hundred dollars nor more than five hundred dollars.

§ 10. No person shall offer, sell or expose for sale in full packages, butter or cheese branded or labeled with a false brand or label as to county or State in which the article is made. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars or more than fifty dollars, or imprisonment of not less than fifteen days or more than thirty days for the first offense, and fifty dollars or thirty days imprisonment for each subsequent offense.

§ 11. No person shall manufacture, sell or offer for sale any condensed milk, unless the same shall be put up in packages upon which shall be distinctly stamped or labeled the name, or brand, by whom or under which the same is made. No condensed milk shall be made, or offered for sale, unless the same is manufactured from pure, clean, healthy, fresh, unadulterated and wholesome milk, from which the cream has not been removed, or unless the proportion of milk solids contained in the condensed milk shall be in amount the equivalent of twelve per centum of milk solids in crude milk, and of such solids twenty-five per centum shall be fat. When condensed milk shall be sold from cans, or packages not hermetically sealed, the vendor shall brand or label such cans or packages with the name of the county or counties from which the same was produced, and the name of the vendor. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than fifty dollars or not more than five hundred dollars, or by imprisonment of not more than six months, or by both such fine and imprisonment for the first offense, and by six months imprisonment for each subsequent offense.

§ 12. Upon the expiration of the term of office of the present commissioner, the Governor, by and with the advice and consent of the Senate, shall appoint a commissioner, who shall be known as the New York State Dairy Commissioner, who shall be a citizen of this State, and who shall hold his office for the term of two years, or until his successor is appointed, and shall receive a salary of three thousand dollars per annum, and his necessary expenses incurred in the discharge of his official duties under this act. Said commissioner shall be charged, under the direction of the Governor, with the enforcement of the various provisions thereof, and with all laws prohibiting or regulating the adulteration of butter, cheese or milk. The said commissioner is hereby authorized and empowered to appoint such assistant

commissioners and to employ such experts, chemists, agents and such counsel as may be deemed by him necessary for the proper enforcement of this law, their compensation to be fixed by the commissioner. The said commissioner is also authorized to employ a clerk at an annual salary not to exceed twelve hundred dollars. The sum of fifty thousand dollars is hereby appropriated, to be paid for such purpose out of any moneys in the treasury not otherwise appropriated. All charges, accounts and expenses authorized by this act shall be paid by the Treasurer of the State upon the warrant of the Comptroller, after such expenses have been audited and allowed by the Comptroller. The entire expenses of said commissioner shall not exceed the sum appropriated for the purposes of this act. The said commissioner shall make annual reports to the Legislature, on or before the fifteenth day of January of each year, of his work and proceedings, and shall report in detail the number of assistant commissioners, experts, chemists, agents and counsel he has employed, with their expenses and disbursements. The said commissioner shall have a room in the New Capitol, to be set apart for his use by the Capitol Commissioner. The said commissioner and assistant commissioners and such experts, chemists, agents and counsel as they shall duly authorize for the purpose, shall have full access, egress and ingress to all places of business, factories, farm buildings, carriages, vessels and cans used in the manufacture and sale of any dairy products or any imitation thereof. They shall also have power and authority to open any package, can or vessel containing such articles which may be manufactured, sold or exposed for sale, in violation of the provisions of this act, and may inspect the contents therein and may take therefrom samples for analysis. This section shall not affect the tenure of the office of the present commissioner.

§ 13. Upon the application for a warrant under this act, the certificate of the analyst or chemist of any analysis made by him shall be sufficient evidence of the facts therein stated. Every such certificate shall be duly signed and acknowledged by such analyst or chemist before an officer authorized to take acknowledgments of conveyances of real estate.

§ 14. Courts of Special Sessions shall have jurisdiction of all cases arising under this act, and their jurisdiction is hereby extended so as to enable them to enforce the penalties imposed by any or all sections thereof.

(Amended by section 4 of chapter 577 of Laws of 1886.)

§ 15. In all prosecutions under this act, one-half of the money shall be paid by the court or clerk thereof to the city or county where the

recovery shall be had, for the support of the poor, except in the city and county of New York shall be equally divided between the pension funds of the police and fire departments, and the residue shall be paid to the Dairy Commissioner, who shall account therefor to the treasury of the State, and be added to and appropriation made to carry out the provisions of this act. All sums of money expended by the Dairy Commissioner under the provisions of this act, shall be audited and allowed by the Comptroller of the State. Any bond given by any officer shall be subject to the provisions of this section.

(Amended by chapter 430 of Laws of 1887.)

§ 16. In all prosecutions under this act relating to the sale and manufacture of unclean, impure, unhealthy, adulterated or unwholesome milk, if the milk be shown to contain more than eighty-eight per centum of water or fluids, or less than twelve per centum of milk solids which shall contain not less than three per centum of fat, it shall be declared adulterated, and milk drawn from cows within fifteen days before and five days after parturition, or from animals fed on distillery waste, or any substance in the state of putrefaction or fermentation, or upon any unhealthy food whatever, shall be declared unclean, unhealthy, impure and unwholesome milk. This section shall not prevent the feeding of ensilage from silos.

(Amended by section 4 of chapter 458 of Laws of 1885.)

§ 17. The doing of anything prohibited being done, and the not doing of anything directed to be done in this act, shall be presumptive evidence of a willful intent to violate the different sections and provisions thereof. If any person shall suffer any violation of the provisions of this act by his agent, servant, or in any room or building occupied or controlled by him, he shall be deemed a principal in such violation and punished accordingly.

§ 18. Chapters four hundred and sixty-seven of the Laws of eighteen hundred and sixty-two, five hundred and forty-four and five hundred and eighteen of the Laws of eighteen hundred and sixty-four, five hundred and fifty-nine of the Laws of eighteen hundred and sixty-five, four hundred and fifteen of the Laws of eighteen hundred and seventy-seven, two hundred and twenty and two hundred and thirty-seven of the Laws of eighteen hundred and seventy-eight, four hundred and thirty-nine of the Laws of eighteen hundred and eighty, and two hundred and fourteen of the Laws of eighteen hundred and eighty-two, are hereby repealed.

(Amended by section 5 of chapter 577 of Laws of 1886, and by section 2 of chapter 583 of Laws of 1887.)

§ 19. If any person shall, by himself or another, violate any of the provisions of sections one, two, three, four or five of this act, or knowingly suffer a violation thereof by his agent, or in any building or room occupied by him, he shall in addition to the fines and punishments therein prescribed for each offense, forfeit and pay a fixed penalty of one hundred dollars. If any person, by himself or another, shall violate any of the provisions of section six, seven or eight of this act, he shall, in addition to the fines and penalties herein prescribed for each offense, forfeit and pay a fixed penalty of five hundred dollars. Such penalties shall be recovered with costs in any court of this State having jurisdiction thereof, in an action to be prosecuted by the Dairy Commissioner or any of his assistants in the name of the people of the State of New York.

§ 20. This act and each section thereof is declared to be enacted to prevent deception in the sale of dairy products, and to preserve the public health which is endangered by the manufacture, sale or use of this article, or substances herein regulated or prohibited.

§ 21. This act shall take effect immediately. Sections six and seven shall not apply to any product manufactured, or in process of manufacture at the time of the passage of this act; but neither this exemption nor this act shall impair the power to prosecute any violations heretofore committed of section six of the act of which this act is supplemental.

CHAPTER 193.

AN ACT to amend chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products."

PASSED April 30, 1885; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section seven of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products," is hereby amended to read as follows :

§ 7. No person shall offer, sell or expose for sale butter or cheese branded or labeled with a false brand or label as to the quality of the article or the county or State in which the article is made. The New York State Dairy Commissioner is hereby authorized and directed to

procure and issue to the cheese manufactories of the State, upon proper application therefor and under such regulations as to the custody and use thereof as he may prescribe, a uniform stencil brand bearing a suitable device or motto, and the words "New York State full cream cheese." Every brand issued shall be used upon the outside of the cheese and also upon the package containing the same, and shall bear a different number for each separate manufactory, and the commissioner shall keep a book in which shall be registered the name, location and number of each manufactory using the said brand, and the name or names of the persons at each manufactory authorized to use the same. It shall be unlawful to use or permit such stencil brand to be used upon any other than full cream cheese or package containing the same. Whoever violates the provisions of this section is guilty of a misdemeanor, and for each and every cheese or package so falsely branded shall be punished by a fine of not less than twenty-five dollars or more than fifty dollars, or imprisonment of not less than fifteen or more than thirty days.

§ 2. This act shall take effect immediately.

CHAPTER 427.

AN ACT to protect butter and cheese manufacturers.

PASSED June 8, 1885; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Whoever shall, with intent to defraud, sell, supply or bring to be manufactured to any butter or cheese manufactory in this State, any milk diluted with water, or in any way adulterated, unclean or impure, or milk from which any cream has been taken, or milk commonly known as skimmed milk, or whoever shall keep back any part of the milk as strippings, or whoever shall knowingly bring or supply milk to any butter or cheese manufactory, that is tainted or sour, or whoever shall knowingly bring or supply to any butter or cheese manufactory, milk drawn from cows within fifteen days before parturition, or within three days after parturition, or any butter or cheese manufacturers who shall knowingly use or allow any of his or her employes or any other person to use for his or her benefit, or for their own individual benefit, any milk or cream from the milk brought to said butter or cheese manufacturer, without the consent of all the owners thereof, or any butter or cheese manufacturer who shall refuse or neglect to keep or cause

to be kept a correct account, open to the inspection of anyone furnishing milk to such manufacturer, of the amount of milk daily received, or of the number of pounds of butter and the number of cheese made each day, or of the number cut or otherwise disposed of, and the weight of each, shall for each and every offense forfeit and pay a sum not less than twenty-five dollars nor more than one hundred dollars, with costs of suit to be sued for in any court of competent jurisdiction for the benefit of the person or persons, firm or association, or corporation or their assigns upon whom such fraud or neglect shall be committed. But nothing in this act shall affect, impair or repeal any of the provisions of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, or of the acts amendatory thereof or supplementary thereto.

§ 2. This act shall take effect immediately.

CHAPTER 458.

AN ACT to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in the sales of dairy products."

PASSED June 9, 1885; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section six of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products," is amended to read as follows:

INVALID — (PEOPLE V. MARX).

§ 6. No person shall manufacture out of any oleaginous substance or substances, or any compound of the same, other than that produced from unadulterated milk, or of cream from the same, any article designed to take the place of butter or cheese produced from pure unadulterated milk or cream of the same, or shall sell, or offer for

sale, the same as an article of food. This provision shall not apply to pure skim milk cheese, made from pure skim milk. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than one hundred dollars, nor more than five hundred dollars or not less than six months or more than one years' imprisonment or both such fine and imprisonment for the first offense, and by imprisonment for one year for each subsequent offense.

§ 2. Section seven of said act is amended so as to read as follows:

(Amended by section 2, chapter 577 of Laws of 1886.)

§ 7. No person by himself or his agents or servants shall render or manufacture out of any animal fat or animal or vegetable oils not produced from unadulterated milk or cream from the same, any article or product in imitation or semblance of or designed to take the place of natural butter or cheese produced from pure unadulterated milk or cream of the same, nor shall he or they mix, compound with, or add to milk, cream or butter any acids or other deleterious substance or any animal fats or animal or vegetable oils not produced from milk or cream, with design or intent to render, make or produce any article or substance or any human food in imitation or semblance of natural butter or cheese, nor shall he sell, keep for sale, or offer for sale any article, or substance or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this State or any other State or country. Whoever violates the provisions of this section shall be guilty of a misdemeanor and punished by a fine of not less than one hundred dollars nor more than five hundred dollars, or not less than six months or more than one years' imprisonment for the first offense, and by imprisonment for one year for each subsequent offense. Nothing in this section shall impair the provisions of section six of this act.

§ 3. Section eight of said act is amended so as to read as follows:

(Amended by section 3 of chapter 577 of Laws of 1886.)

§ 8. No person shall manufacture, mix or compound with or add to natural milk, cream or butter any animal fats or animal or vegetable oils, nor shall he make or manufacture any oleaginous substance not produced from milk or cream, with intent to sell the same for butter or cheese made from unadulterated milk or cream, or have the same in his possession, or offer the same for sale with such intent, nor shall any article or substance or compound so made or produced, be sold for butter or cheese, the product of the dairy. If any person shall

coat, powder or color with annatto or any coloring matter whatever butterine or oleomargarine, or any compounds of the same or any product or manufacture made in whole or in part from animal fats or animal or vegetable oils not produced from unadulterated milk or cream whereby the said product, manufacture or compound shall be made to resemble butter or cheese, the product of the dairy, or shall have the same in his possession or shall sell, or offer for sale, or have in his possession any of the said products which shall be colored or coated in semblance of or to resemble butter or cheese, it shall be conclusive evidence of an intent to sell the same for butter or cheese, the product of the dairy. Whoever violates any of the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than one hundred dollars nor more than one thousand dollars. This section shall not be construed to impair or affect the prohibitions of sections six and seven of this act.

§ 4. Section seventeen of said act is amended so as to read as follows:

§ 17. The doing of anything herein prohibited being done, shall be evidence of a violation of the provisions of this act relative to the thing so prohibited; and the not doing of anything herein directed to be done, shall be evidence of a violation of the provisions of this act relative to the thing so directed to be done. If any person shall suffer any violation of the provisions of this act by his agent, servant, or in any room or building occupied or controlled by him, he shall be deemed a principal in such violation and punished accordingly.

§ 5. This act shall take effect immediately.

CHAPTER 577.

AN ACT to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products."

PASSED JUNE 4, 1886; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section one of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two

hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products," is hereby amended so as to read as follows:

(Amended by chapter 223 of Laws of 1887.)

§ 1. No person or persons shall sell or exchange, or expose for sale or exchange, any unclean, impure, unhealthy, adulterated or unwholesome milk, or shall offer for sale any article of food made from the same, or of cream from the same. The provisions of this section shall not apply to skimmed milk sold for use in the county in which it is produced, provided it is sold for and as such. This provision shall not apply to pure skim cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or by imprisonment of not less than one month or more than six months, or by both such fine and imprisonment, for the first offense, and by six months imprisonment for each subsequent offense.

§ 2. Section seven of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, as amended by chapter four hundred and fifty-eight of the Laws of eighteen hundred and eighty-five, is hereby amended so as to read as follows:

§ 7. No person, by himself or his agents or servants, shall render or manufacture out of any animal fat or animal or vegetable oils not produced from unadulterated milk or cream from the same, any article in imitation or semblance of natural butter or cheese produced from pure unadulterated milk or cream of the same, nor mix, compound with, or add to milk, cream or butter any acids or other deleterious substance, or any animal fats or animal or vegetable oils not produced from milk or cream, so as to produce any article or substance or any human food in imitation or semblance of natural butter or cheese, nor sell, keep for sale, or offer for sale, any article, substance or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this State or elsewhere. This section shall not be so construed as to require evidence of a willful or intentional violation thereof. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than one hundred dollars nor more than five hundred dollars, or not less than six months or more than one year imprisonment for the first offense, and by imprisonment for one year for each subsequent offense.

Nothing in this section shall impair the provisions of section six of this act.

§ 3. Section eight of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, as amended by chapter four hundred and fifty-eight of the Laws of eighteen hundred and eighty-five, is hereby further amended so as to read as follows :

§ 8. No person shall manufacture, mix or compound with or add to natural milk, cream or butter any animal fats or animal or vegetable oils, nor shall he make or manufacture any oleaginous substance not produced from milk or cream, with intent to sell the same for butter or cheese made from unadulterated milk or cream, or have the same in his possession, or offer the same for sale with such intent, nor shall any article or substance or compound so made or produced, be sold, intentionally or otherwise, as and for butter or cheese, the product of the dairy. No person shall coat, powder or color with annatto or any coloring matter whatever, butterine or oleomargarine, or any compounds of the same or any product or manufacture made in whole or in part from animal fats or animal or vegetable oils not produced from unadulterated milk or cream whereby the said product, manufacture or compound shall resemble butter or cheese, the product of the dairy, or shall have the same in his possession, with intent to sell the same, or shall sell or offer the same for sale. No person shall be excused from liability under this section or section seven of this act on account of want of knowledge of the nature or ingredients of the product so in his possession, sold or offered for sale by him. Whoever violates any of the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine not less than one hundred dollars nor more than one thousand dollars. This section shall not be construed to impair or affect the prohibitions of sections six and seven of this act.

§ 4. Section fifteen of such act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, is hereby amended so as to read as follows :

§ 15. In all prosecutions under this act one-half of the money shall be paid by the court or clerk thereof to the city or county where the recovery shall be had, for the support of the poor, except in the city and county of New York, and the city of Brooklyn shall be equally divided between the pension funds of the police and fire departments, and the residue shall be paid into the treasury of the State. All sums of money expended by the Dairy Commissioner under the provisions of this act shall be audited and allowed by the Comptroller of the

State. Any bond given by any officer shall be subject to the provisions of this section.

§ 5. Section nineteen of such act, chapter one hundred and eighty-three, of the Laws of eighteen hundred and eighty-five, is hereby amended so as to read as follows :

(Amended by section 2 of chapter 583 of Laws of 1887.)

§ 19. If any person shall, by himself or another, violate any of the provisions of sections one, two, three, four or five of this act or knowingly suffer a violation thereof by his agent, or in any building or room occupied by him, he shall in addition to the fines or punishments therein prescribed, for each offense forfeit and pay a fixed penalty of one hundred dollars. If any person, by himself or another, shall violate any of the provisions of sections six, seven or eight of this act, he shall, in addition to the fines and penalties herein prescribed, for each offense forfeit and pay a fixed penalty of five hundred dollars. Such penalties shall be recovered with costs in any court of this State having jurisdiction thereof, in an action to be prosecuted by the Dairy Commissioner, or any of his assistants or by any citizen authorized to sue in the name of the people of the State of New York.

§ 6. The following sections are added to said act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five:

(Amended by section 3 of chapter 583 of Laws of 1887.)

§ 22. For the purposes of said act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, as amended by chapter four hundred and fifty-eight of the Laws of eighteen hundred and eighty-five, and as hereby amended, the terms "natural butter and cheese," "natural butter or cheese produced from pure unadulterated milk or cream of the same," "butter or cheese made from unadulterated milk or cream," "butter or cheese the product of the dairy," and "butter or cheese" shall be understood to mean the products usually known by the terms "butter" and "cheese," and which are manufactured exclusively from milk or cream, or both, with salt and rennet, and with or without coloring matter or sage.

§ 23. The prosecution shall not be compelled to elect in any trial for the misdemeanors wheresoever committed, or suit for the penalties wheresoever incurred by the violations of sections six, seven or eight, where the indictment, information or complaint charges a violation of any two or all such sections of said act, as amended, between the charges or counts under such different sections whether such prose-

cutions or suits have already been commenced or shall hereafter be instituted.

§ 24. An action, now or hereafter brought to recover a penalty provided by section nineteen of said act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, shall have a preference upon the calendar of the courts of record of this State next after civil causes entitled to a preference under the provisions of subdivision one of section seven hundred and ninety-one of the Code of Civil Procedure, where the attorney for the people therein has given notice, at the time of the service of notice of trial or argument, of a particular day in a term on which he will move it. If the action is not moved by him for trial or argument on that day, or as soon thereafter in the same term as the court can hear it, the other party may then move the trial or argument, otherwise it shall not be moved out of its order at that term except by the special order of the court. The note of issue filed by such attorney for the people shall state the day in the term on which he has given notice that he will move it, and the clerk of the court shall place such cause upon the day calendar of that day as a preferred cause as hereinbefore provided. No order for the clerk to do so shall be necessary.

§ 25. Actions for penalties under the provisions of this act and of the act of which this is amendatory may be brought and prosecuted in the name of the people of the State of New York by any citizen of the State, and the citizen so prosecuting said action shall be entitled to and shall receive one-half of the penalty or judgment recovered, The balance of the judgment or recovery shall be paid over to the city or county in which the action is brought as provided by section fifteen of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five. Any citizen so prosecuting shall execute and file an undertaking with the court in which the action is brought in the penalty of one hundred dollars conditioned for the payment of any costs which the defendant in the action may recover.

§ 7. This act shall take effect on the first day of August, eighteen hundred and eighty-six; but the sections as herein amended shall not apply to any product manufactured or in process of manufacture on the first day of August, eighteen hundred and eighty-six. This act shall not impair the power to prosecute any violations committed prior to the time of its taking effect, of the sections hereby amended pursuant to and in the manner and under the rules and regulations provided by such sections as they existed prior to the passage of this act. This act is declaratory of the existing law.

CHAPTER 223.

AN ACT to amend chapter five hundred and seventy-seven of the laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sale of dairy products, and to preserve the public health,' " being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in the sales of dairy products."

PASSED April 27, 1887; three-fifths being present; without the approval of the Governor.*

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section one of chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sale of dairy products, and to preserve the public health,' being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled 'An act to prevent deception in sales of dairy products,' " is hereby amended so as to read as follows :

§ 1. No person or persons shall sell or exchange, or expose for sale or exchange,† any unclean, impure, unhealthy, adulterated or unwholesome milk, or shall offer for sale any article of food made from the same, or of cream from the same. The provisions of this section shall not apply to skimmed milk sold for use in the county in which it is produced, provided it is sold for and as such. This provision shall not apply to pure skim cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars or by imprisonment of not less than one month or more than six months, or by both such fine and imprisonment for the first offense; and by a fine of not less than fifty

*Not returned by the Governor within ten days after it was presented to him, and became a law without his signature. [Art. IV, Sec. 9, Constitution of the State of New York.]

†So in the original.

dollars nor more than four hundred dollars or by imprisonment of not less than one month nor more than six months, or by both such fine and imprisonment for a second offense, and for a third or any subsequent offense by a fine of not less than two hundred dollars and imprisonment not less than thirty days and not exceeding three months.

§ 2. This act shall take effect immediately.

CHAPTER 430.

AN ACT to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in the sale of dairy products."

PASSED May 23, 1887; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section sixteen of chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health, being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled 'An act to prevent deception in the sales of dairy products,'" is hereby amended so as to read as follows:

§ 16. When any officer, authorized by this act to inspect milk offered for sale shall, in the discharge of his duties, take a sample of milk for purposes of analysis, it shall be his duty to take duplicate samples thereof, in the presence of at least one witness, and he shall in the presence of such witness, seal both of the said samples, and shall tender and if accepted deliver, at the time of such taking, one sample to the vender of said milk or to the person having custody of the same with the statement, in writing, of the cause of the sample having been taken. In all prosecutions, under this act, relating to the manufacture and sale of unclean, impure, unhealthy, adulterated or unwholesome milk, if the milk be shown to contain more than eighty-eight per centum of water or fluids, or less than twelve per centum of milk solids, which shall contain not less than three per centum of fat, it shall be declared adulterated; and milk drawn from cows within fifteen days before, and five days after, parturition, or from

animals fed on distillery waste, or any substance in the state of fermentation or putrefaction, or upon any unhealthy food whatever, shall be declared unclean, unhealthy, impure and unwholesome milk. This section shall not prevent the feeding of ensilage.

§ 2. This act shall take effect immediately.

CHAPTER 583.

AN ACT to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products," as amended by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sale of dairy products, and to preserve the public health,' " being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products."

PASSED June 16, 1887; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The following sections are added to said act chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled "An act to prevent deception in the sale of dairy products, and to preserve the public health," being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled "An act to prevent deception in sales of dairy products," as amended by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sale of dairy products and to preserve the public health,' being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled 'An act to prevent deception in sales of dairy products.'"

§ 26. A search warrant, in the name of the people, directed to a peace officer commanding him to search for dairy products, imitations

thereof and substitutes therefor, to open any place of business, factory, building, store, bakery, hotel, tavern, boarding-house, restaurant, saloon, lunch counter, place of public entertainment, carriage, car, boat, package, vessel, barrel, box, tub or can, containing or believed to contain the same, in the possession or under the control of any person who shall refuse to allow the same to be inspected or samples taken therefrom by the said commissioner, assistant commissioner, or such experts, chemists, agents or counsel as such commissioner or assistant commissioners shall duly authorize, for the purpose, or to which access is refused or prevented, and to allow and enable the officer mentioned in section twelve applying therefor to take such samples of dairy products, imitations thereof and substitutes therefor, found in the execution of the warrant, as the officer applying for the search warrant shall designate when the same are found, shall be issued by any magistrate to whom application is made therefor, whenever it shall be made to appear to him that such person has refused to permit any dairy products, imitations thereof or substitutes therefor to be inspected or samples taken therefrom, or that access thereto by any officer mentioned in section twelve has been refused or prevented, and that such officer has reasonable grounds for believing that such person has any dairy products, imitations thereof or substitutes therefor in his possession, or under his control, or that he is violating any of the provisions of this act. The provisions of section seven hundred and ninety-one to section eight hundred and two, both inclusive, of the Code of Criminal Procedure, shall apply to such warrant as far as applicable thereto. The peace officer to whom the warrant is delivered shall make a return in writing of his proceedings thereunto to the magistrate who issued the same.

§ 27. No keeper or proprietor of any bakery, hotel, tavern, boarding-house, restaurant, saloon, lunch counter, or place of public entertainment, or any person having charge thereof or employed thereat, shall keep, use, or serve therein, either as food for their guests, boarders, patrons or customers, or for cooking purposes, any article made in violation of the provisions of section seven of this act, as amended by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six. This section shall not be so construed as to require evidence of a willful or intentional violation thereof. Whoever violates the provisions of this section shall be guilty of a misdemeanor and punished by a fine of not less than fifty dollars nor more than two hundred dollars, or not less than ten days or more than thirty days imprisonment for the first offense, and by imprisonment for one year for each subsequent offense.

§ 2. Section nineteen of such act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, as amended by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, is hereby amended so as to read as follows:

§ 19. If any person shall by himself or another violate any of the provisions of section one, two, three, four or five of this act, or knowingly suffer a violation thereof by his agent, or in any building or room occupied by him he shall in addition to the fines and punishments therein prescribed, for each offense forfeit and pay a fixed penalty of one hundred dollars. If any person, by himself or another, shall violate any of the provisions of section six, seven, eight, or twenty-seven of this act, he shall in addition to the fines and penalties therein prescribed, for each offense forfeit and pay a fixed penalty of five hundred dollars. Such penalty shall be recovered, with costs, in any court of this State having jurisdiction thereof, in an action to be prosecuted by the Dairy Commissioner or any of his assistants, or by any citizen authorized to sue in the name of the people of the State of New York. In any action heretofore or hereinafter commenced in the Supreme Court for the recovery of such penalties an application may be made on the part of the plaintiff to said court or any justice thereof, for an injunction to restrain the defendant, his agents, servants and employes, from the further violation of the sections or section on which such action is based during the pendency thereof; and it shall be the duty of such court or justice to grant the injunction upon proof by affidavits that the defendant has been guilty of a violation of such sections or section as alleged in the complaint, or subsequent to the commencement of the action has been guilty of a violation thereof, and in the same manner as injunctions are usually granted under the rules and practice of such court. No security on the part of the plaintiff shall be required upon the granting of such injunction; and the court or justice shall make such order thereon as to the costs of the application as may be deemed just and proper. In case the plaintiff shall recover judgment for the penalties or penalty demanded in the complaint, the said judgment shall contain a permanent injunction restraining the defendant, his agents, servants and employes from any further violations of the sections or section on which the recovery is obtained. Any injunction secured under this section may be served by posting the same upon the outer door of the defendant's usual place of business, or where such violation was committed, or shall hereafter be committed, or in the manner required by the Code of Civil Procedure and the rules and practice of the court. It shall not be necessary to prove the personal service of the injunction where such service can not be

secured with reasonable diligence, but the service hereinbefore provided shall be deemed and held sufficient in any proceeding for the violation of such injunction.

§ 3. Section twenty-two of such act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, as added thereto by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, is hereby amended so as to read as follows:

§ 22. For the purpose of said act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five as amended by chapter four hundred and fifty-eight of the Laws of eighteen hundred and eighty-five, and by chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, and as hereby amended, the terms "natural butter and cheese," "natural butter or cheese produced from pure unadulterated milk or cream of the same," "butter or cheese from unadulterated milk or cream," "butter or cheese, the product of the dairy," and "butter or cheese," shall be understood to mean the products * usually known by the terms "butter" and "cheese," and which are manufactured exclusively from milk or cream, or both, with or without salt or rennet, or both, and with or without coloring matter or sage or both.

§ 4. This act shall take effect immediately. Section three and section twenty-seven, hereby added to such act, chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, shall not apply to any product manufactured, or in process of manufacture, at the time of the passage of this act; but neither this exception nor this act shall impair the power to prosecute any violations committed prior to the time of its taking effect, of the sections hereby amended or of any laws existing at the time of its taking effect pursuant to and in the manner and under the rules and regulations provided by such sections and laws as they existed prior to the passage of this act.

CHAPTER 298.

AN ACT to promote agriculture and to improve the quality of butter and cheese.

APPROVED by the Governor May 15, 1888. PASSED, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The New York State Dairy Commissioner is authorized, empowered and directed to appoint and employ expert butter and cheese makers not exceeding five in number, whose duty it shall be,

* So in the original.

under his directions, to examine and inspect butter and cheese factories and the methods employed therein, and attend at such agricultural fairs, institutes, meetings and conventions, within the State, as shall be designated by the commissioner, to impart thereat information as to the best and most approved methods of making butter and cheese and improving the quality thereof. The compensation of such experts shall be fixed by the commissioner, and their necessary expenses incurred in the performance of their duties audited by him; and the same shall be paid by the Treasurer of the State upon the warrant of the Comptroller thereafter. The sum of five thousand dollars is hereby appropriated for such purpose, to be paid out of any moneys in the treasury not otherwise appropriated; and the entire expenses of the commissioner under this act shall not exceed such sum. The commissioner on or before the fifteenth day of December of this year shall report the number of experts employed under this act and their compensation and expenses, which shall be included in his annual report.

§ 2. This act shall take effect immediately.

CHAPTER 550.

AN ACT to amend chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sales of dairy products, and to preserve the public health,' being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled 'An act to prevent deception in the sale of dairy products.'"

As amended by chapter two hundred and twenty-three of the Laws of eighteen hundred and eighty-seven.

APPROVED by the Governor June 9, 1888. PASSED, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section one of chapter five hundred and seventy-seven of the Laws of eighteen hundred and eighty-six, entitled "An act to amend chapter one hundred and eighty-three of the Laws of eighteen hundred and eighty-five, entitled 'An act to prevent deception in the sale of dairy products, and to preserve the public health,' being supplementary to and in aid of chapter two hundred and two of the Laws of eighteen hundred and eighty-four, entitled 'An act to prevent

deception in the sales of dairy products,' " as amended by chapter two hundred and twenty-three of the Laws of 'eighteen hundred and eighty-seven, is hereby amended so as to read as follows :

§ 1. No person or persons shall sell or exchange, or expose for sale or exchange, any unclean, impure, unhealthy, adulterated or unwholesome milk, or shall offer for sale any article of food made from the same, or cream from the same. The provisions of this section shall not apply to skimmed milk sold for use in the county in which it is produced, and in the adjoining counties, except in New York and Kings counties (where it shall apply), provided it is sold for and as such. This provision shall not apply to pure skim cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming. Whoever violates the provisions of this section is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars or by imprisonment of not less than one month or more than six months, or by both such fine and imprisonment for the first offense; and by a fine of not less than fifty dollars nor more than four hundred dollars or by imprisonment of not less than one month nor more than six months, or by both such fine and imprisonment for a second offense, and for a third or any subsequent offense by a fine of not less than two hundred dollars and imprisonment not less than thirty days and not exceeding three months.

§ 2. This act shall take effect immediately.

I N D E X.

B.

	PAGE.
Birge, J. C., letter of	676
Blank, sent to cheese-makers	378
Butter, committee, report of	363
Butter, cows for	318
Butter, feeding for	326
Butter, sale of, effect upon the farm	327

C.

Cheese, as made by Mr. A. Holdredge	434, 443
Cheese, brand	359
Cheese, committee, report of	371
Cheese, Canadian, composition of	421, 445
Cheese, composition of, as made by modified Cheddar process ..	426, 429, 446
Cheese, composition of samples made by stirred curd process, 430, 431, 432	433, 447
Cheese, composition of Mr. Holdredge's	443
Cheese, composition of night skims	443
Cheese, experiments on solubility of, and the comparative solubility of samples made by the different processes	449, 459
Cheese instructors	361
Cheese, made by the modified Cheddar process, as employed by the cheese instructors of the New York State Dairy Commission ..	372, 423, 673
Cheese, method of manufacturing known as the "Time System," by D. Macpherson	417
Cheese, pounds of milk for a pound of	320
Cheese, poisoning by	466
Cheese, process of manufacturing of	417, 445
Cheese, stirred curd process	429
Circular relative to dairy interests	362
Clark, A. D., work of	496
Clark, R. D., report of	418
Cleanliness, importance of, in dairy	366
Cows, care of	322, 375
Cows, comfort of	326
Cows, effect of cold food and water upon	349
Cows, exercise of	350
Cows, exposure of	320, 321
Cows, feeding of	320, 325, 332

	PAGE
Cows for butter.....	318
Cows, income of	347
Cows, number of, in the United States.....	493
Cows, physical condition of.....	347
Corn fodder.....	338
Cream, ripening of.....	367, 368
Creameries, visiting of.....	7
Curds, floating of.....	369

D.

Dairy Laws of New York State.....	691
Department, organization of.....	5
Disbursements, detailed statement of	400
DuBois, T. O., work of	496, 614, 615

E.

Edmunds, F. W., letter of.....	677
Expert cheese-makers.....	670
Experts, work of	494

F.

Factories, abstract of inspection of.....	9, 300
Factories, abstract of inspection of Allegany county.....	9, 302
Factories, abstract of inspection of Broome county.....	26, 302
Factories, abstract of inspection of Cattaraugus county.....	30, 302
Factories, abstract of inspection of Cayuga county.....	54, 303
Factories, abstract of inspection of Chautauqua county.....	60, 303
Factories, abstract of inspection of Chemung county	80, 304
Factories, abstract of inspection of Chenango county.....	84, 304
Factories, abstract of inspection of Columbia county.....	94, 305
Factories, abstract of inspection of Cortland county.....	96, 305
Factories, abstract of inspection of Delaware county.....	104, 305
Factories, abstract of inspection of Erie county.....	109, 306
Factories, abstract of inspection of Fulton county	122, 306
Factories, abstract of inspection of Genesee county	126, 306
Factories, abstract of inspection of Herkimer county.....	130, 307
Factories, abstract of inspection of Jefferson county	150, 307
Factories, abstract of inspection of Lewis county	158, 306
Factories, abstract of inspection of Livingston county	169, 308
Factories, abstract of inspection of Madison county	172, 309
Factories, abstract of inspection of Monroe county	182, 309
Factories, abstract of inspection of Montgomery county	188, 308
Factories, abstract of inspection of Niagara county.....	196, 300
Factories, abstract of inspection of Oneida county.....	200, 310
Factories, abstract of inspection of Onondaga county	212, 310
Factories, abstract of inspection of Ontario county	216, 311
Factories, abstract of inspection of Orleans county	220, 311
Factories, abstract of inspection of Oswego county	224, 311

	PAGE.
Factories, abstract of inspection of Otsego county.....	232, 312
Factories, abstract of inspection of St. Lawrence county	240, 312
Factories, abstract of inspection of Schenectady county.....	254, 313
Factories, abstract of inspection of Schuyler county	258, 313
Factories, abstract of inspection of Seneca county.....	263, 313
Factories, abstract of inspection of Steuben county.....	266, 314
Factories, abstract of inspection of Tioga county.....	272, 314
Factories, abstract of inspection of Tompkins county	276, 315
Factories, abstract of inspection of Wayne county	280, 315
Factories, abstract of inspection of Wyoming county	286, 315
Factories, abstract of inspection of Yates county	296, 316
Factories, abstract of recapitulation of.....	300, 316
Factories, sanitary condition of.....	463, 469
Factories, condition of	7
Factories, drainage of.....	464, 473, 644
Factories, visiting of	7
Factories, water supply of.....	464
Feeding, standards of	332
Feeding, stuffs, average composition of	334
Fish, E. J., letter of	677
Foods, digestibility of.....	345
Foods, elements of	364
Foods, for cattle	320, 322, 329
Foods, for cattle for summer.....	337
Foods, nature of.....	326
Forced results	665

G.

Geisler, J. F., work of	498
Gove, L. S., work of	499
Gray, T. R., work of.....	495
Griffis, O. C., work of.....	613, 618

H.

Hall, W. W., report of.....	686
Hartley, S. F., letter of	679
Hodgkin, J. F. letter of	679

I.

Inspections and tests.....	323
Inspection of butter.....	475
Inspection of Columbia county creamery.....	473
Inspection of cow stables.....	407
Inspection of creamery and clarifying milk process at Cobleskill, N. Y.,	471
Inspection of creamery at Guilford, N. Y.....	472
Inspection of milk handled by peddlers	473
Instructors, value of	328
Investigation of an endemic of typhoid fever at Fort Plain, N. Y., alleged to have been caused by milk.....	476

J.		PAGE
Jenkins, E. H., reference to compilation by		333
K.		
Keene, Hiram B., letter of		679
L.		
Laws of New York relative to dairy products.....		691
Love, E. G., work of.....		498
M.		
Manure, food makes a difference in.....		324
Meeteer, W. W., work of		494
Milk, adulteration of.....		603, 634
Milk, aeration of		461
Milk, care of.....		459
Milk, cooling of		366, 462
Milk, condensed.....		596
Milk, effect of food upon		323
Milk, inspection of.....		6, 602, 628
Milk, mixing of.....		370
Milk, pounds of, for a pound of butter		317, 319
Milk, pounds of, for a pound of cheese.....		320
Milk, receipts of, in New York city.....		583
Milk, standard, wisdom of		325
Milk, starting taint in.....		369
Milk, tainted		355, 459
Milk, tainted, effect on cheese.....		355
Milk, tainted, effect on cheese, causes and remedies		355, 359
Moore, R. W., abstract of report of		687
Moore, R. W., work of.....		498
Morgan, M. T., letter of.....		683
O.		
Olendorf, C. D., work of.....		499
Oleomargarine, manufacture and sale of		6
Oleomargarine, manufacture and sale of, reduction in.....		484
Oleomargarine, method of manufacturers of		492
P.		
Pastures		326
Pastures, improving of.....		347
Perry, M. A., report of		625
Powell, Geo. T., communication from		376
Prosecutions		490, 501, 502
Prosecutions, Albany district		474
Prosecutions, Buffalo		627
Prosecutions, effect upon the trade		491
Prosecutions, Port Richmond.....		482

R.

PAGE.

Ration, character of	333
Ration, for feeding	341
Ration, for fattening	344
Ration, for working oxen	344
Ration, foundation for	334
Report of butter committee	363
Report of cheese committee	371
Report of Dr. R. D. Clark	417
Results, how to better them	324
Richardson, R. J. & Co., letter of	680

S.

Salmon, A. C., work of	498
Sears, Charles	613, 616
Silage	338
Smith, G. A., letter and report of	684
Soil, effect of dairying upon	326
Soil, effect of cropping of	328
Sorogan, J. J., work of	494, 619
Spence, W. G., report of	661
Statistics, table of	9
Stillwell & Gladding, work of	498
Sutley, P. J., report of	625
Swine, keeping of	326

T.

Testimonials	676
Tuthill, F. D., report of	601

V.

Van Valkenburgh, B. F., report of	480
---	-----

W.

Wheeler, J. R., work of	497, 617
Whey, Canadian, composition of	423, 445
Whey, composition of, made by modified Cheddar process	426, 428
	429, 446
Whey, composition of, made by stirred curd process ..	430, 431, 432, 433, 448
Whey, feeding of	352
Wilson, E. S., work of	495
Windecker, Wm. S., letter of	680

